THE SEGMENTATION PROCESS AND ITS INFLUENCE ON STRUCTURE IN THE *MALHEUR ME BAT* MASSES OF OBRECHT AND JOSQUIN

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This study examines in detail the various aspects of the segmentation process as applied by Obrecht and Josquin to the chanson *Malheur me bat*, especially the effect of this process on the structure of each composer's respective mass. Although musical aspects such as cadences and mode have varying degrees of influence on the structure of these two masses, the primary influence is the establishment of proportional relationships that occur as a result of the segmentation process.

Sources of previous music research frequently point out that Obrecht's Mass utilizes both the Phrygian and Aeolian modes, while in Josquin's Mass the Phrygian mode is the firmly established mode throughout.

Since segments in Obrecht's Mass are usually not connected to one another, strong cadences frequently occur at the end of the segments throughout. On the other hand, since the segments in Josquin's Mass are usually connected to one another, weak internal cadences frequently occur throughout, with strong cadences reserved for the end of sections.

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CHAPTER 1

INTRODUCTION

In choosing a topic for this study, I was intrigued by the idea of comparing and contrasting the approaches of two different composers who selected the same work as a model for their own respective compositions. My research led me to the *Malheur me bat* Masses of Obrecht and Josquin, which were modeled after the *Malheur me bat* chanson. These two composers, while contemporaries, exhibit compositional techniques that are significantly different, providing an interesting opportunity to pursue further research.

My initial thought concerning the historical background surrounding the chanson and the two masses was that this knowledge might be useful for observing the manner in which Obrecht's Mass influenced Josquin's Mass (or vice versa). Unfortunately, the available research so far has not answered all of the questions pertaining to the history of the chanson and these masses and any relationship they might have to one another.

In fact, the details of the historical background related to the chanson itself has not yet been entirely ascertained. Earlier research by Barton Hudson[1] leans towards Martini as the author, but recent research by M. Jennifer Bloxam[2] gives the attribution to Malcort. The exact composition date of the chanson has not been determined either, though

[1] Barton Hudson, "Two Ferrarese Masses by Jacob Obrecht," in *Journal of Musicology*, vol. 4 (1985 – 1986): 279 – 283.
[2] M. Jennifer Bloxam, "Masses Based on Polyphonic Songs and Canonic Masses," in *Josquin Companion* (Oxford: Oxford University Press, 2000), 177 – 178.

Hudson and Bloxam both contend that it could have been no later than about 1480.

Similarly, the composition date of Josquin's Mass has not yet been determined with a great deal of certainty. While Hudson's research shows that 1497 was clearly the composition date of Obrecht's Mass based on an earliest source manuscript, the composition date of Josquin's Mass cannot be as easily ascertained since the source manuscripts are not as definitive. Helmuth Osthoff[3] suggests that Josquin composed his mass before his entrance into the papal chapel in 1486.[4] Edward E. Lowinsky[5] includes the mass with other masses in which the melancholy nature of the text dates to Josquin's presumed service with the exiled Ascanio Sforza in 1480-2. Bloxam[6] maintains that the two earliest independent sources dated 1505 are also the earliest surviving sources for the *Hercules dux Ferrariae* Mass, and that the mass probably originates from Josquin's service at the court of Ferrara in 1503-4.

While these two composers exhibit compositional techniques that are significantly different from one another, it is interesting to note that both composers implemented a segmentation process for the construction of their masses. The technique of dividing a cantus prius factus into segments is frequently used by Obrecht in his masses, but for Josquin it is his only mass that utilizes this technique.

The selection of this chanson by the two composers as the model for their respective

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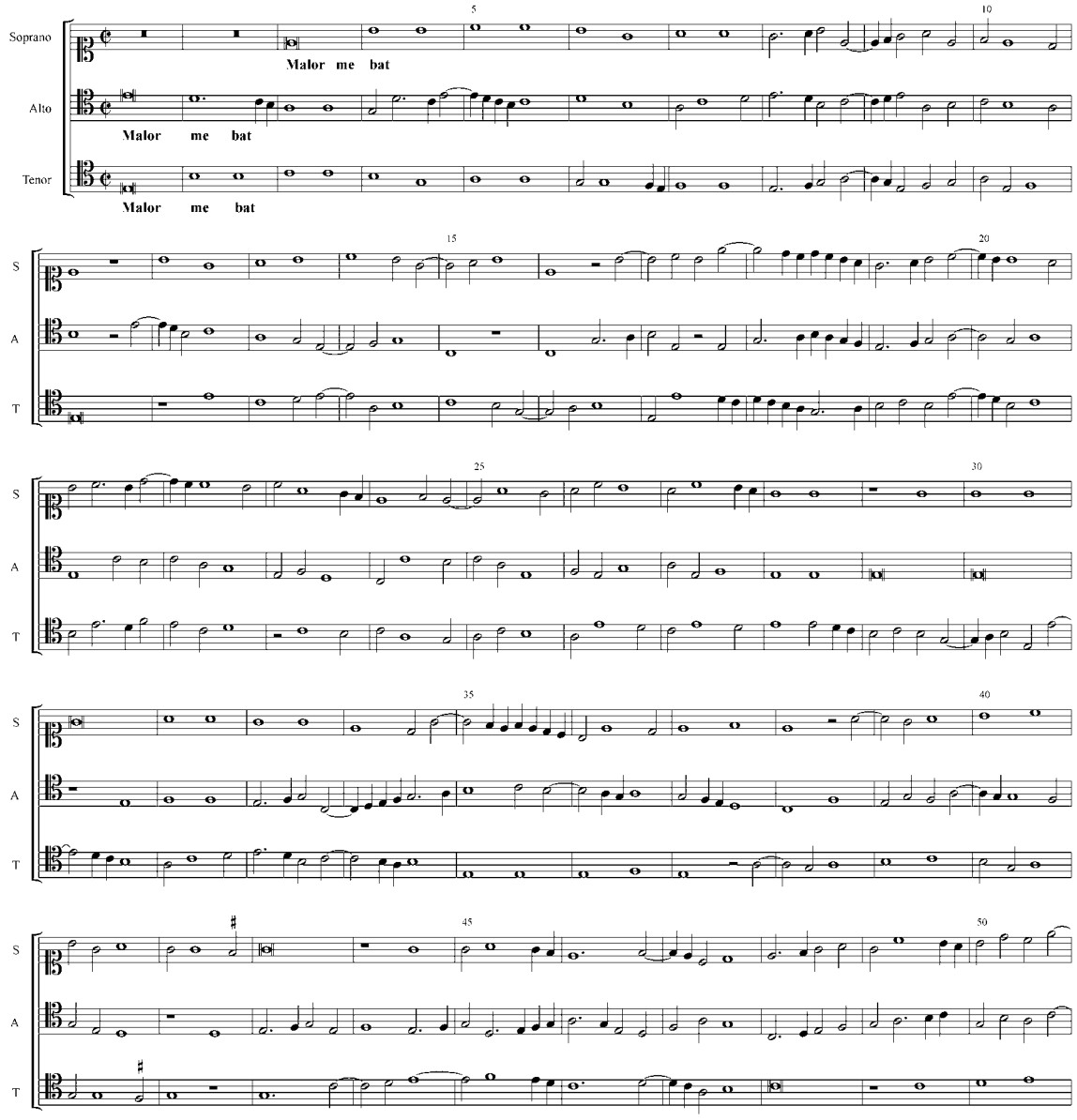
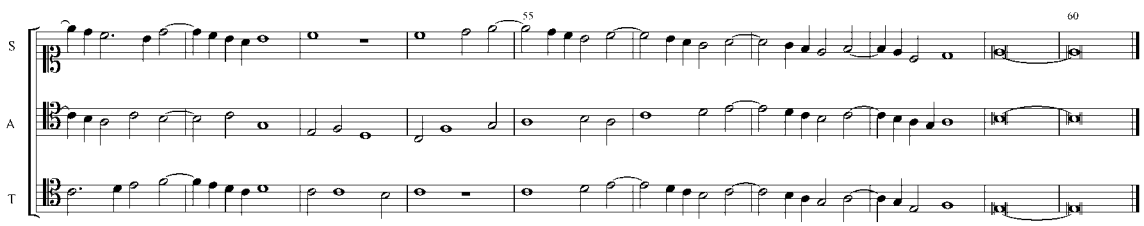
[3] Helmuth Osthoff, *Josquin Desprez* (Tutzing: 1962 – 1965), 151.
[4] Josquin's entrance into the papal chapel is now known to have taken place in 1486 (see Pamela F. Starr, "Josquin, Rome, and a Case of Mistaken Identity," in *Journal of Musicology, vol.* 15 (1997), 43 – 65.
[5] Edward E. Lowinsky, "Ascanio Sforza's Life: a Key to Josquin's Biography and an Aid to the Chronology of his Works," in *Josquin des Prez: New York 1971* (London: Oxford University Press, 1976), 65.
[6] Bloxam, 185 – 186.

masses is in itself an interesting choice, since there is nothing inherent in this chanson that makes it particularly suited for manipulation by a segmentation process.

Example 1. Chanson, measures 1 – 60 (soprano, alto, tenor)





The chanson *Malheur me bat* is in the Phrygian mode, with the first cadence (m. 11) and last cadence (m. 59) on E. There is also a strong cadence on E that occurs in m. 28 on E which divides the chanson almost exactly into two equal parts. Internal cadences are as follows: B (m. 21), C (m. 23), A (m. 26), E (m. 37), three consecutive cadences on G (mm. 41, 42, and 43), and C (m. 54). While it would seem that cadences already provide a convenient opportunity for ending a segment and that the two composers would readily incorporate these cadences as segment endings in their own compositions (in fact, the cadence at m. 11 on E is used by both composers as a segment ending), for the most part these cadences are ignored by the two composers in their segmentation processes. It was the discovery of this feature that convinced me that a thorough examination of the segmentation processes of these two composers would be worthy of an in-depth study.

Table 1
Obrecht Segmentation Chart

	Segments as Numbered by Reese	Location in Mass			Location in Chanson		Length of Segment		Beginning of Segment				End of Segment			
		Part	Measures	Voice	Measures	Voice	Mass	Chanson	Preceded by	First Note	Vertical Sonority	Cadence	Followed By	Last Two Notes	Vertical Sonority	Cadence
1	1	Kyrie	4 - 7	Soprano	3 - 7	Soprano	24	40	Rest	E	CEG Triad		Rest	A - A	DFA Triad	
2	1	Kyrie	11 - 15	Soprano	3 - 7	Soprano	20	40	Rest	E	ACE Triad		Rest	A - A	DFA Triad	
3	1	Kyrie	17 - 20	Soprano	3 - 8	Soprano	16 (10 + 6)	43 (40 + 3)	Rest	E	ACE Triad			A - G	EGB Triad	E
4	2	Kyrie	55 - 72	Soprano	8 - 11	Soprano	72 (48 + 24)	28 (24 + 4)		G	EG Dyad		Non-Continuous Segment	D - E	CEG Triad	E
5	2	Kyrie	73 - 81	Soprano	8 - 11	Soprano	36 (24 + 12)	28 (24 + 4)	Last Note Of Segment	G	EGB Triad		Non-Continuous Segment	D - E	CE Dyad	E
6	2	Kyrie	82 - 86	Soprano	8 - 11	Soprano	20 (12 + 8)	28 (24 + 4)	Last Note Of Segment	G	CEG Triad			D - E	EAB Triad/ AE Dyad	E/A
7		Gloria	17 - 27	Bass	1 - 11	Tenor	44	88	Non-Cantus Firmus Material	A	Single Note A	A	Non-Continuous Segment	B - A	AC Dyad	A
8		Gloria	28 - 32	Bass	8 - 11	Tenor	20 (12 + 8)	32 (24 + 8)	Non-Cantus Firmus Material	E	EGB Triad		Rest	F - E	EB Dyad	E
9	3	Gloria	31 - 72	Soprano	12 - 19	Soprano	168 (144 + 24)	59 (56 + 3)	Rest	B	EB Dyad	E	Rest	A - G	EGB Triad	E
10		Gloria	73 - 83	Bass	11 - 21	Tenor	44 (40 + 4)	82 (80 + 2)	Non-Cantus Firmus Material	A	FA Dyad		Rest	F - E	EB Dyad	E
11	3	Gloria	83 - 98	Soprano	12 - 19	Soprano	64 (56 + 8)	59 (56 + 3)	Rest	B	EB Dyad	E	Rest	A - G	EGB Triad	E
12	3	Gloria	104 - 111	Soprano	12 - 19	Soprano	32 (28 + 4)	59 (56 + 3)	Rest	B	EB Dyad			A - G	EGB Triad	E
13		Gloria	116 - 123	Tenor	19 - 26	Soprano	29 (28 + 1)	58 (56 + 2)	Rest	G	EG Dyad	E	Non-Cantus Firmus Material	G - A	Single Note A	A
14	4	Gloria	148 - 183	Soprano	19 - 26	Soprano	144 (120 + 24)	58 (56 + 2)	Rest	G	CG Dyad		Rest	G - A	AE Dyad	A
15	4	Gloria	196 - 211	Soprano	19 - 26	Soprano	64 (56 + 8)	58 (56 + 2)	Rest	G	EGB Triad		Rest	G - A	AC Dyad	A
16	4	Gloria	218 - 225	Soprano	19 - 26	Soprano	32 (28 + 4)	58 (56 + 2)	Rest	G	EGB Triad			G - A	AE Dyad	A

(table continues)

Table 1 *(continued)*

	Segments as Numbered by Reese	Location in Mass			Location in Chanson		Length of Segment		Beginning of Segment				End of Segment			
		Part	Measures	Voice	Measures	Voice	Mass	Chanson	Preceded by	First Note	Vertical Sonority	Cadence	Followed By	Last Two Notes	Vertical Sonority	Cadence
17	5	Credo	37 - 61	Soprano	26 - 33	Soprano	100 (96 + 4)	64 (48 + 16)	Rest	A	Single Note A	A	Rest	A - G	EGB Triad	E
18	5	Credo	80 - 92	Soprano	26 - 33	Soprano	52 (48 + 4)	64 (48 + 4)	Rest	A	Single Note A	A	Rest	A - G	GBD Triad	
19	5	Credo	105 - 117	Soprano	26 - 33	Soprano	48 (44 + 8)	64 (48 + 4)	Rest	A	Single Note A	A		A - G	EGB Triad	E
20	6	Credo	142 - 171	Soprano	33 - 38	Soprano	120 (96 + 24)	44 (40 + 4)	Rest	G	EGB Triad	E	Rest	F - E	ACE Triad	E
21	6	Credo	184 - 198	Soprano	33 - 38	Soprano	60 (48 + 12)	44 (40 + 4)	Rest	G	EGB Triad	E	Rest	F - E	ACE Triad	
22	6	Credo	207 - 218	Soprano	33 - 38	Soprano	48 (40 + 8)	44 (40 + 4)	Rest	G	CEG Triad		Rest	F - E	ACE Triad	E
23	6	Credo	223 - 229	Soprano	33 - 38	Soprano	28 (20 + 8)	44 (40 + 4)	Rest	G	EGB Triad	E		F - E	EAB Triad/ AE Dyad	A
24	7	Sanctus	13 - 42	Soprano	38 - 43	Soprano	120 (96 + 24)	48 (40 + 8)	Rest	E	AE Dyad	A	Rest	F - G	EGB Triad	G
25	7	Sanctus	59 - 70	Soprano	38 - 43	Soprano	48 (40 + 8)	48 (40 + 8)	Rest	E	EGB Triad		Rest	F - G	EGB Triad	G
26	7	Sanctus	77 - 82	Soprano	38 - 43	Soprano	24 (20 + 4)	48 (40 + 8)	Rest	E	EG Dyad		Rest	F - G	EGB Triad	G
27	8	Sanctus	164 - 184	Soprano	44 - 48	Soprano	84 (60 + 24)	31 (28 + 3)	Rest	G	EGB Triad	E		D - E	CEG Triad	E
28	8	Sanctus	188 - 196	Soprano	44 - 48	Soprano	36 (28 + 8)	31 (28 + 3)	Rest	G	EGB Triad		Rest	D - E	CEG Triad	E
29	8	Sanctus	198 - 203	Soprano	44 - 48	Soprano	22 (14 + 8)	31 (28 + 3)	Rest	G	CEG Triad		Rest	D - E	EAB Triad/ AE Dyad	E/A
30	9	Agnus Dei	3 - 30	Soprano	48 - 60	Soprano	112 (88 + 24)	104 (88 + 16)	Rest	E	EGB Triad			D - E	EGB Triad/ ACE Triad	
31	9	Agnus Dei	33 - 58	Soprano	48 - 60	Soprano	104 (88 +16)	104 (88 + 16)	Rest	E	AE Dyad	A	Rest	D - E	CE Dyad	C
32	9	Agnus Dei	60 - 73	Soprano	48 - 60	Soprano	56 (44 + 12)	104 (88 + 16)	Rest	E	CEG Triad	C	Rest	D - E	EGB Triad/ AE Dyad	E/A

Table 2
Josquin Segmentation Chart

	Location in Mass			Location in Chanson		Length of Segment		Beginning of Segment				End of Segment			
	Part	Measures	Voice	Measures	Voice	Mass	Chanson	Preceded by	First Note	Vertical Sonority	Cadence	Followed by	Last Two Notes	Vertical Sonority	Cadence
1	Kyrie	1 - 11	Soprano	1 - 11	Tenor	84 (80 + 4)	88 (80 + 8)		E	Single Note E		Rest	F - E	Single Note E	E
2	Kyrie	11 - 21	Tenor	1 - 11	Tenor	104 (80 + 8)	88 (80 + 8)	Rest	E	Single Note E	E	Rest	F - E	EG Dyad/ EGB Triad	E
3	Kyrie	23 - 43	Alto	12 - 32	Tenor	162 (156 + 6)	158 (156 + 2)	Rest	E	EG Dyad		Non-Cantus Firmus Material	B - A	FAC Triad	A
4	Kyrie	42 - 63	Tenor	12 - 34	Tenor	188 (176 + 8)	180 (176 + 4)	Rest	E	EGB Triad			A - B	EGB Triad	E
5	Kyrie	65 - 82	Tenor	35 - 60	Tenor	228 (192 + 16)	208 (192 + 16)		E	Single Note E			F - E	CE Dyad/ EGB Triad	E
6	Gloria	3 - 11	Soprano	3 - 11	Soprano	72 (64 + 8)	68 (64 + 4)	Rest	E	CE Dyad		Rest	D - E	Single Note E	E
7	Gloria	11 - 17	Tenor	1 - 7	Tenor	56	56	Rest	E	Single Note E	E	Rest	E - F	FAC Triad	
8	Gloria	28 - 37	Tenor	1 - 10	Tenor	80	80	Rest	E	EG Dyad	G	Non-Continuous Segment	E - F	FAC Triad	
9	Gloria	38 - 46	Tenor	8 - 16	Tenor	72	72	Non-Continuous Segment	E	CE Dyad		Non-Continuous Segment	A - B	GBD Triad	
10	Gloria	47 - 61	Tenor	11 - 25	Tenor	120	120	Non-Continuous Segment	E	CEG Triad		Non-Continuous Segment	C - B	GB Dyad	
11	Gloria	62 - 76	Tenor	17 - 31	Tenor	120	120	Non-Continuous Segment	E	EG Dyad		Non-Continuous Segment	C - B	GBD Triad	
12	Gloria	77 - 83	Tenor	26 - 32	Tenor	56	56	Non-Continuous Segment	A	ACE Triad		Non-Continuous Segment	C - D	GBD Triad	
13	Gloria	84 - 86	Tenor	32 - 34	Tenor	20	20	Non-Continuous Segment	A	FAC Triad		Non-Continuous Segment	B - A	FA Dyad	
14	Gloria	86 - 87	Tenor	33 - 34	Tenor	12	12	Non-Continuous Segment	E	CEG Triad		Last Note Of Segment	B - A	FA Dyad	

(table continues)

Table 2 *(continued)*

	Location in Mass			Location in Chanson		Length of Segment		Beginning of Segment				End of Segment			
	Part	**Measures**	**Voice**	**Measures**	**Voice**	**Mass**	**Chanson**	**Preceded by**	**First Note**	**Vertical Sonority**	**Cadence**	**Followed by**	**Last Two Notes**	**Vertical Sonority**	**Cadence**
15	Gloria	96 - 100	Tenor	35 - 39	Tenor	20	20	Rest	E	Single Note E		Rest	B - C	AC Dyad	A
16	Gloria	107 - 114	Tenor	35 - 42	Tenor	64	64	Rest	E	EG Dyad		Non-Continuous Segment	G - A	DFA Triad	
17	Gloria	115 - 123	Tenor	40 - 48	Tenor	72	72	Non-Continuous Segment	B	EB Dyad	E	Non-Continuous Segment	B - C	CE Dyad	
18	Gloria	124 - 133	Tenor	43 - 52	Tenor	80	80	Non-Continuous Segment	G	EG Dyad		Non-Continuous Segment	C - D	BD Dyad	
19	Gloria	134 - 138	Tenor	49 - 53	Tenor	40	40	Non-Continuous Segment	Rest	Single Note C	C	Non-Continuous Segment	C - B	GBD Triad	
20	Gloria	139 - 144	Tenor	53 - 58	Tenor	48	48	Non-Continuous Segment	C	CE Dyad		Non-Continuous Segment	E - F	DFA Triad	
21	Gloria	145 - 149	Tenor	54 - 58	Tenor	40	40	Non-Continuous Segment	C	CEG Triad	E	Last Note OfSegment	E - F	DFA Triad	
22	Credo	5 - 21	Soprano	3 - 11	Soprano	136	68	Rest	E	EGB Triad		Rest	D - E	CE Dyad	E
23	Credo	25 - 33	Soprano	3 - 11	Soprano	68	68	Rest	E	ACE Triad		Continuous Segment	D - E	EB Dyad	E
24	Credo	34 - 41	Soprano	12 - 15	Soprano	64	32	Continuous Segment	B	EGB Triad		Non-Continuous Segment	A - B	GB Dyad	
25	Credo	42 - 45	Soprano	12 - 15	Soprano	32	32	Non-Continuous Segment	B	GB Dyad		Continuous Segment	A - B	GB Dyad	
26	Credo	46 - 61	Soprano	16 - 23	Soprano	128	64	Continuous Segment	E	CEG Triad		Non-Continuous Segment	G - F	FAC Triad	
27	Credo	62 - 69	Soprano	16 - 23	Soprano	64	64	Non-Continuous Segment	E	EGB Triad		Continuous Segment	G - F	Single Note F	
28	Credo	70 - 75	Soprano	24 - 26	Soprano	48	24	Continuous Segment	E	CE Dyad		Non-Continuous Segment	C - B	GBD Triad	
29	Credo	76 - 78	Soprano	24 - 26	Soprano	24	24	Non-Continuous Segment	E	ACE Triad		Continuous Segment	C - B	GBD Triad	
30	Credo	79 - 82	Soprano	27 - 28	Soprano	32 (16 + 16)	16 (8 + (4 + 4))	Continuous Segment	A	FAC Triad		Non-Continuous Segment	A - G	EGB Triad	E
31	Credo	83 - 85	Soprano	27 - 28	Soprano	32 (8 + 16)	16 (8 + (4 + 4))	Non-Continuous Segment	A	FAC Triad			A - G	EGB Triad	E

(table continues)

Table 2 *(continued)*

	Location in Mass			Location in Chanson		Length of Segment		Beginning of Segment				End of Segment			
	Part	**Measures**	**Voice**	**Measures**	**Voice**	**Mass**	**Chanson**	**Preceded by**	**First Note**	**Vertical Sonority**	**Cadence**	**Followed by**	**Last Two Notes**	**Vertical Sonority**	**Cadence**
32	Credo	92 - 96	Soprano	29 - 33	Soprano	40 (32 + 8)	40 (32 + (4 + 4))	Rest	Rest			Rest	A - G	CEG Triad	
33	Credo	103 - 107	Soprano	29 - 33	Soprano	40 (32 + 8)	40 (32 + (4 + 4))	Rest	Rest	Single Note B		Continuous Segment	A - G	CEG Triad	
34	Credo	108 - 110	Soprano	34 - 36	Soprano	24	24	Continuous Segment	E	CEG Triad		Non-Continuous Segment	E - D	DFA Triad	
35	Credo	111 - 113	Soprano	34 - 36	Soprano	24	24	Non-Continuous Segment	E	CE Dyad	E	Continuous Segment	E - D	DFA Triad	
36	Credo	114 - 120	Soprano	37 - 43	Soprano	56	56	Continuous Segment	E	EGB Triad	E	Non-Continuous Segment	F - G	Single Note G	G
37	Credo	121 - 127	Soprano	37 - 43	Soprano	56	56	Non-Continuous Segment	E	CE Dyad		Continuous Segment	F - G	Single Note G	G
38	Credo	128 - 131	Soprano	44 - 47	Soprano	32	32	Continuous Segment	Rest	EG Dyad		Non-Continuous Segment	C - D	BD Dyad	
39	Credo	132 - 135	Soprano	44 - 47	Soprano	32	32	Non-Continuous Segment	Rest	CE Dyad	C	Continuous Segment	C - D	DF Dyad	
40	Credo	136 - 140	Soprano	48 - 52	Soprano	40	40	Continuous Segment	E	Single Note E		Non-Continuous Segment	A - B	GBD Triad	
41	Credo	141 - 145	Soprano	48 - 52	Soprano	40	40	Non-Continuous Segment	E	CEG Triad		Continuous Segment	A - B	GBD Triad	
42	Credo	146 - 154	Soprano	53 - 60	Soprano	80 (48 + 24)	64 (48 + 16)	Continuous Segment	C	ACE Triad			D - E	ACE Triad/ EGB Triad	E
43	Benedictus	176 - 186	Alto	1 - 11	Alto	96 (80 + 8)	84 (80 + 4)		E	Single Note E			A - B	GB Dyad	B
44	Benedictus	187 - 197	Alto	1 - 11	Alto	96 (80 + 8)	84 (80 + 4)		D	Single Note D			G - A	Single Note A	A
45	Benedictus	198 - 208	Alto	1 - 11	Alto	96 (80 + 8)	84 (80 + 4)		A	Single Note A			D - E	Single Note E	E

CHAPTER II

EXPLANATION OF THE SEGMENTATION CHART

The underlying purpose of this study is to examine in detail the various aspects of the segmentation process as applied by Obrecht and Josquin to the *Malheur me bat* chanson, especially the effect of this process on the structure of each composer's respective mass. This study, then, is concerned mainly with the examination of the process by which a composer extracts only sections and not an entire voice part of the chanson for use as the cantus prius factus. While it might be argued that using a quotation of the entire voice part of the chanson exerts a certain influence on the structure of the part of the mass where it is employed (i.e., using the entire tenor part of the chanson as the cantus prius factus in the Credo), there is no active choice by the composer regarding the segmentation of a voice part of the chanson (i.e., where to begin and end a segment); therefore, I am excluding from this study the examination of cantus prius factus statements that consist of quotations of an entire voice part of the chanson. This study also excludes questionable quotations of sections of music from the chanson that do not appear to be intended as real quotations for use as a cantus prius factus. These usually appear to be some kind of derived version of music taken from the chanson (i.e., melodic fragments that have altered pitches and/or rhythms when compared to music of the chanson) and frequently occur during sections of canonic treatment before and/or

between real statements of the cantus prius factus.

Two segmentation charts provide the groundwork for this study. Both cover the same material, the only difference being that the first chart covers the segments in Obrecht's Mass, while the second chart covers the segments in Josquin's Mass. The charts identify the following categories: Location in Mass, Location in Chanson, Length of Segment, Beginning of Segment, and End of Segment (see tables 1 and 2).

Segments as Numbered by Reese

To avoid confusion regarding the numbering of segments in Obrecht's Mass, it was decided to incorporate into this study the numbering system used by Gustave Reese in his discussion of Obrecht's *Malheur me bat* Mass.[1] Any discussion of segments in Obrecht's Mass will be made according to this numbering system.

Location in Mass

The part of the mass where the cantus prius factus segment is located is given first, followed by the measure numbers that include the cantus prius factus segment from beginning to end, and finally the voice part that contains the cantus prius factus segment.

Location in Chanson

The location of each cantus prius factus segment found in the various parts of the mass is followed by the corresponding location of its segment in the chanson. The

[1] Gustave Reese, *Music in the Renaissance* (New York: W. W. Norton and Company, 1954), 199.

measure numbers that include the corresponding segment of the chanson from beginning to end is given first, then the voice part that contains the corresponding segment.

Length of Segment

The length of the cantus prius factus segment in the mass is followed by the length of its corresponding segment in the chanson. Because the various parts of the mass and the chanson are often notated in different meters[2], it was decided to use the quarter note as a common measuring rule. The length of a segment, then, is the duration from the first to the last note in quarter notes (i.e., one whole note equals 4, two whole notes equal 8, etc.).

A major concern in measuring the length of segments, especially those in Obrecht's Mass, is that the last note of a cantus prius factus segment appears to be exceptionally long compared to rest of the segment; this tends to give a somewhat false idea regarding the true length of the segment. In addition, the duration of the last note of a segment was not always retained by composers; on a number of occasions, the last note of the segment was lengthened (as an ending to a phrase, i.e., a cadence) or shortened (having a segment continue as a melodic line). In these cases, the decision was made to show the length of a segment by using two different sets of numbers, one set that includes the last note with the rest of the segment (shown as a number without parentheses) and, if necessary, another set that separates the last note from the rest of the segment (shown as two numbers separated by a plus sign inside the parentheses). If the last note appears to be in

[2] For the source for notation of music to Obrecht's Mass, see Barton Hudson ed., *New Obrecht Edition*, vol. 7 (1983), 1 – 42; for the source for notation of music to Josquin's Mass, see Barton Hudson ed., *New Josquin Edition*, vol. 9 (1987), 1 - 41.

correct proportion compared to the rest of the segment, the length of the segment will be shown by a single number without the parentheses (in this case, a set of numbers inside the parentheses is not needed). If the last note does not appear to be in proportion to the rest of the segment, the length of the segment will be shown by two numbers separated by a plus sign inside the parentheses (in this case, a single number without the parentheses is also shown). The first number inside the parentheses is the length of the segment without the last note, and the second number in the parentheses is the length of the last note alone. The two numbers inside the parentheses added together equal the single number without the parentheses.

Beginning of Segment; End of Segment

The next two parts of the chart are concerned mainly with melodic and harmonic aspects that occur at the beginning and at the end of the segment. The examination of these aspects is considered an integral part of this study, as they are a primary consideration in the compositional process of separating the various voice parts of the chanson into segments.

Beginning of Segment

Before the segment begins, the event that precedes it is given. Most of the events listed on the chart are self-explanatory; however, the following will require some clarification. There are two types of connected segments: continuous and non-continuous. When two connected segments correspond to one continuous segment

from a voice of the chanson, each segment will be referred to as a continuous segment; conversely, when two connected segments do not correspond to one continuous segment from a voice of the chanson, each segment will be referred to as a non-continuous segment. If a space on the chart is left blank, it always means that a section begins with the statement of a segment.

The first note at the beginning of the segment is given next, followed by the vertical sonority that occurs at the beginning of the segment. If a cadence occurs at the beginning of the segment, the note on which there is a cadence is given. Because these are often the first aspects that a composer considers in the statement of a segment, they are usually given a significant role in the establishment of mode.

End of Segment

After the segment ends, the event that follows it is given. Most of the events listed on the chart are self-explanatory; a couple of areas that may require some clarification can be found in the previous section "Beginning of Segment."

The last two notes at the end of the segment is given next, followed by the vertical sonority that occurs at the end of the segment. If a cadence occurs at the end of the segment, the note on which there is a cadence is given. Closely related to the previous discussion concerning the impact that aspects at the beginning of the segment have on the establishment of mode, those aspects at the end of the segment have as much and perhaps even more influence on the mode than those aspects at the beginning of the segment.

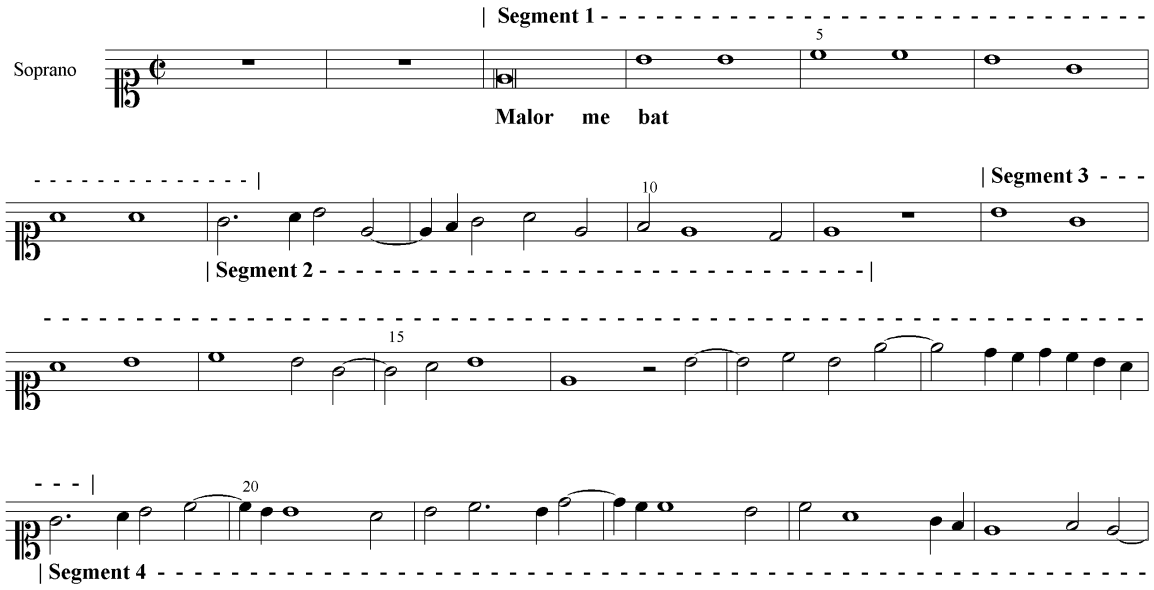
CHAPTER III

MASS BY OBRECHT

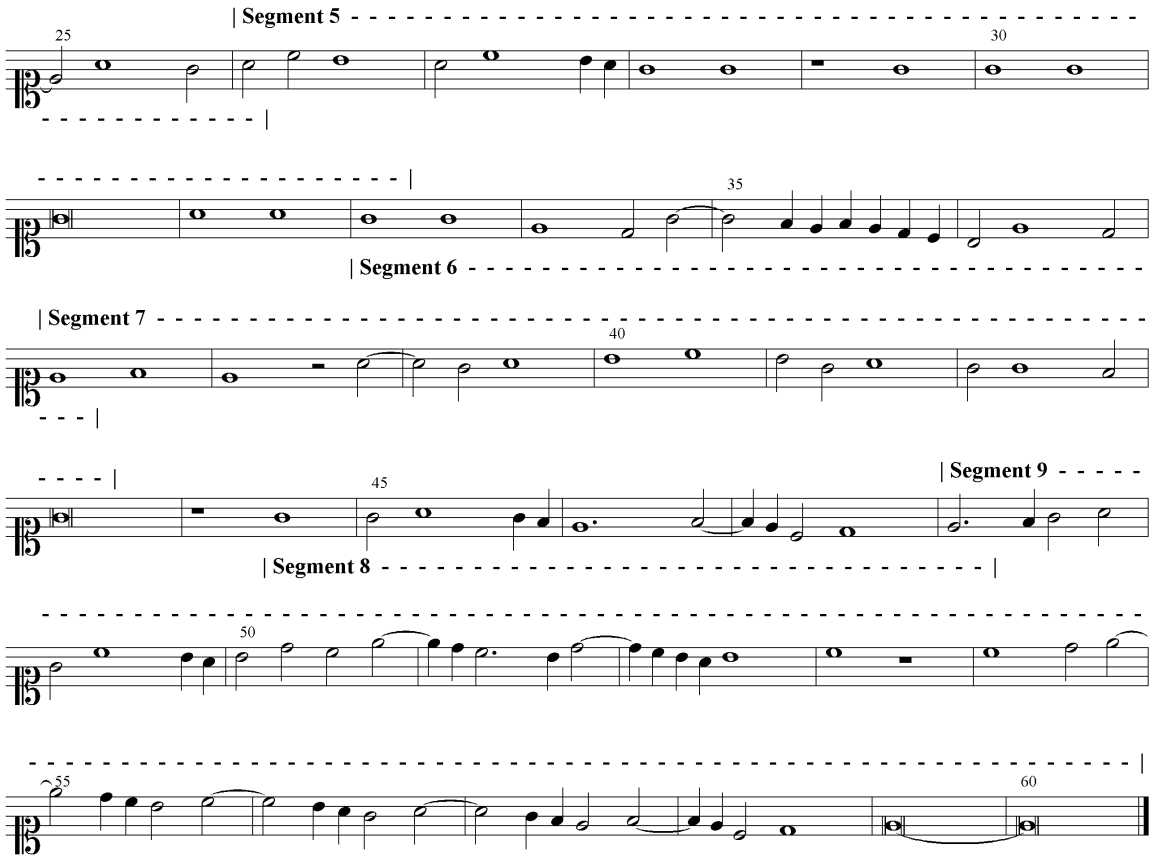
Location in Mass; Location in Chanson

Reese's description of the segmentation process employed by Obrecht in his mass is that the soprano of the chanson is divided into nine segments from the Kyrie to the Agnus Dei I as follows:[1]

Example 2. Chanson, measures 1 – 60 (soprano)



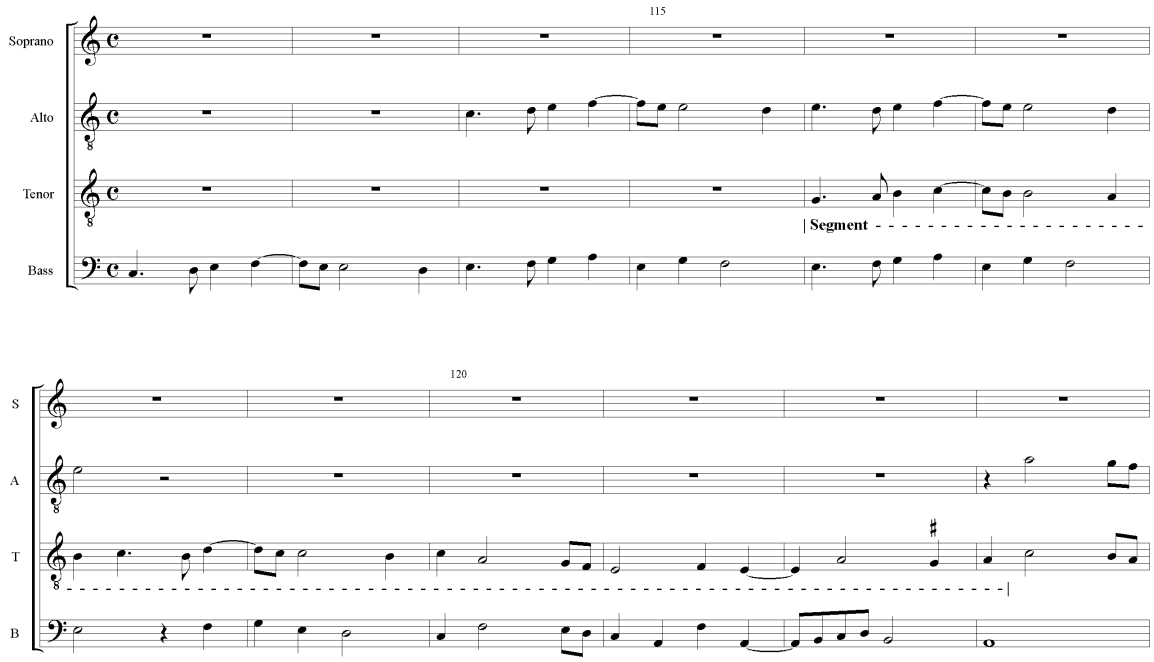
[1] Gustave Reese, *Music in the Renaissance* (New York: W. W. Norton and Company, 1954), 199.



It is also Reese's contention that all of the segments appear three times except for segment 6, which occurs four times.[2] While it is true that segment 6 does indeed appear four times, it is not the only segment that makes that many appearances. There is another appearance of segment 4 in the tenor in mm. 116 – 123 in the tenor of the Gloria. All of the other statements of cantus prius factus segments are found in the soprano (as Reese observes); however, this is the only statement that is located in a voice other than the soprano. In fact, it is the first of four statements of segment 4, coming before the following three appearances that all occur in the soprano.

[2] Reese, 199 - 200.

Example 3. Gloria, measures 112 – 123 (soprano, alto, tenor, bass)

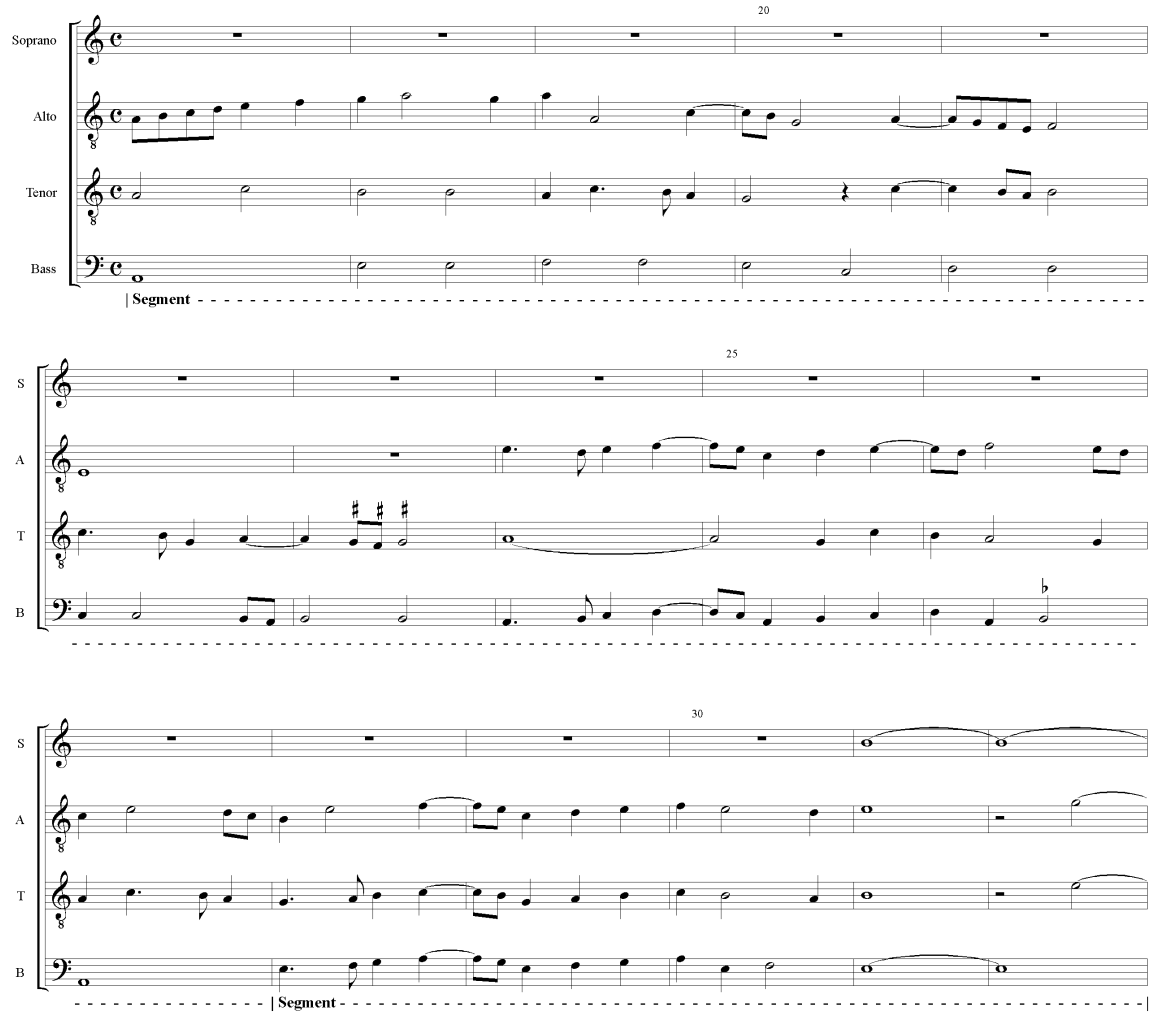


That this fourth statement does not appear in the soprano as all of the other statements of segment 4 (not to mention all of the statements of the other segments as well) would seem to give the fourth statement less credibility as a "real" statement of the segment. It does, in fact, follow imitative entries in the bass in m. 112 and in m. 114 in the alto before its statement in m. 116 in the tenor. Nonetheless, it is exact in pitch and rhythm compared to the other three statements in the soprano.

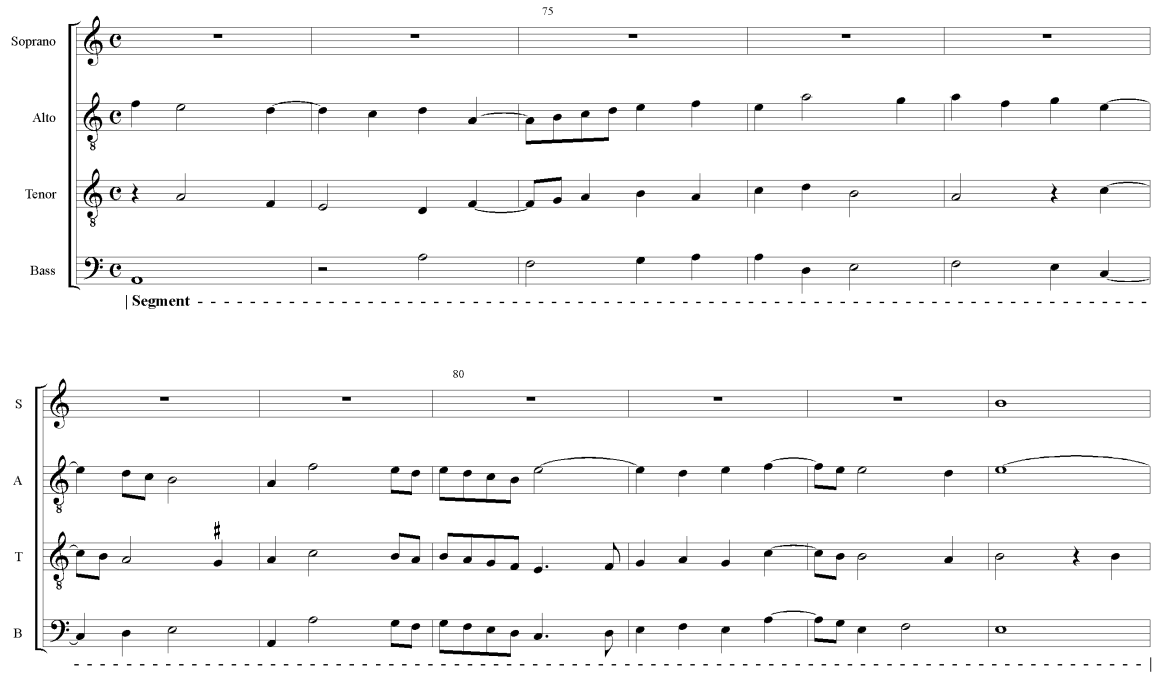
One perspective is not to give the fourth statement of segment 4 legitimacy because it does not fit the plan of having the statements all occur in the soprano voice. Another perspective is to consider that the statement of segment 4 in the tenor is proof that not all of the questions regarding the form of Obrecht's Mass have been answered.

If one accepts the idea that not all of the segments must occur in the soprano voice, and that other voices of the chanson can be used as a cantus prius factus segment as long as the segment strictly follows the voice of the chanson, there are three other segments that need to be discussed. The first two segments occur in mm. 17 – 32 in the bass of the Gloria, and third segment occurs in mm. 73 – 83 in the bass of the Gloria.

Example 4. Gloria, measures 17 – 32 (soprano, alto, tenor, bass)



Example 5. Gloria, measures 73 – 83 (soprano, alto, tenor, bass)



The first two segments found in mm. 17 – 32 in the bass of the Gloria correspond to mm. 1 – 11 in the tenor of the chanson. Actually, there is a statement of a segment that follows a partial statement of the same segment transposed up a fifth. The entire statement of the segment (mm. 17 – 27 in the bass of the Gloria) corresponds to mm. 1 – 11 in the tenor of the chanson; the partial statement of the same segment that follows the entire statement of the segment transposed up a fifth (mm. 28 – 32 in the bass of the Gloria) corresponds to mm. 8 – 11 in the tenor of the chanson.

If these statements of segments existed with no connection to other segments, a case might be made that the segments are not "real" statements of a segment, although even that point could be argued based on the strict adherence of the length to the original.

However, the third segment found in mm. 73 – 83 in the bass of the Gloria shows that the statements of segments in mm. 17 – 32 in the bass of the Gloria do, in fact, have a connection to the third segment. The third segment corresponds to mm. 11 – 21 in the tenor of the chanson transposed down a fifth. This segment begins its first note by repeating the last note of the preceding segment, a plan used extensively by Obrecht for the segments in the soprano. This is discussed further in the following section "Length of Segment."

Length of Segment

Regarding the length of the statement of segments, for the most part Obrecht follows a plan described by Reese[3] in which the length of the last statement of a segment corresponds to the length of a segment as it appears in the chanson, with the last statement of the segment being preceded by statement of the segment in augmentation. In segments 2, 4, 7, and 8, the last statement of the segment is first preceded by statements of the segments in augmentation, first in double augmentation and the second in normal augmentation. The last statement of segment 6 is likewise first preceded by a statement of the segment in double augmentation, but has two statements of the segment in normal augmentation in between instead of one. The treatment of other segments employs variations of this plan.

There appears to be one irregular feature in Obrecht's treatment of these segments: frequently the last note does not appear to be in correct proportion to the rest of

[3] Reese, 200.

the segment. Immediately the question arises as to whether the measurement of the length of a segment should include or exclude the last note of a segment. The decision was made to show the length of a segment that both included and excluded the last note of the segment; this plan allows a more accurate comparison regarding the length of segments to be made. A more detailed discussion of the solution to this problem can be found in the section "Explanation of the Segmentation Chart: Length of Segment."

Using this plan, if the last note is excluded from the rest of the segment, the length of statements of segment 2 are exactly as Reese describes them (48:24:12, or put more simply, 4:2:1). The length of the statements of the other segments are for the most part as Reese describes them as well, but the other segments do not follow his description in as strict a manner as segment 2. However, in all of these other segments (except segment 5), the length of the last two statements of each segment strictly follows a 2:1 ratio.

A comparison of the length of segments to one another that excludes the last note of the segments does not reveal any other proportional ratio. A closer examination of the last notes of the segments, however, shows that Obrecht did not assign durations to the last notes of the segments indiscriminately. Definite proportional relationships are present, primarily those involving the 2:1, 3:1, and 3:2 ratios.

Table 3
Last Note of Segment Chart

	Part	Measures	Length	Proportional Relationships
1	Kyrie	67 - 72	24	8:12 = 2:3; 8:24 = 1:3; 12:24 = 1:2
2	Kyrie	79 -81	12	
3	Kyrie	85 - 86	8	
4	Gloria	67 - 72	24	4:8 = 1:2; 4:24 = 1:6; 8:24 = 1:3
5	Gloria	97 - 98	8	
6	Gloria	111	4	
7	Gloria	178 - 183	24	4:8 = 1:2; 4:24 = 1:6; 8:24 = 1:3
8	Gloria	210 - 211	8	
9	Gloria	225	4	
10	Credo	166 - 171	24	8:12 = 2:3; 8:24 = 1:3; 12:24 = 1:2
11	Credo	196 - 198	12	
12	Credo	228 - 229	8	
13	Sanctus	37 - 42	24	4:8 = 1:2; 4:24 = 1:6; 8:24 = 1:3
14	Sanctus	69 - 70	8	
15	Sanctus	82	4	
16	Agnus Dei	25 - 30	24	12:16 = 3:4; 12:24 = 1:2; 16:24 = 2:3
17	Agnus Dei	55 - 58	16	
18	Agnus Dei	71 - 73	12	

It soon becomes evident that a structural process using proportional relationships was being employed, an idea that was not confined only to music during the time Obrecht composed this mass. Rudolf Wittkower writes that the proportions in architecture during the Renaissance followed the laws of a higher order, and that these proportions were found in musical consonances determined by the ratio of small whole numbers on which

the Greek musical system was based: the octave (2:1), fifth (3:2), and fourth (4:3).[4]

Beginning of Segment

An examination of the music in Obrecht's Mass shows that out of 32 segments, the beginning of 26 segments are preceded by rests. The only segments that are not preceded by rests are the three statements of segment 2 (the first statement occurs at the beginning of the Kyrie II and the second and third statements are each preceded by a long sustained note that is the last note of the preceding statement of this segment) and the three segments that occur in the bass of the Gloria (the entrances of these segments are immediately followed by material unrelated to the cantus firmus).

Obrecht uses only four pitches for the beginning notes of his segments: G, E, A, and B. G is used most often (fourteen times), followed by E (ten times), then A (five times), and finally B (three times).

Not only does Obrecht emphasize G quantitatively by beginning a great number of segments with G, he also seems to put emphasis on G as the first note of a segment in another more subtle way: except for the Agnus Dei, every part of the mass has three to four statements of a segment that serve as ending statements for the various parts of the mass; all of these statements have G as the first note of the segment. No other pitch is given this kind of extensive treatment.

Before an examination of vertical sonorities can begin, a discussion regarding the

[4] Rudolf Wittkower, *Architectural Principles in the Age of Humanism* (New York: W. W. Norton and Company, 1971), 101 – 104.

assignment of dyads and single note sonorities to triads needs to be addressed. Since dyads separated by a third can be interpreted as belonging to one of two triads (i.e., both the EGB triad and the CEG triad contains the dyad EG), these dyads will be included as belonging to two different chords. Dyads separated by a fifth will be assumed to belong to a triad that is missing its third (i.e., the dyad EB belongs to an EGB triad). An analysis of the single note sonority (and its octave equivalents) reveals that it functions primarily as the root of an implied triad. This is especially evident when the single note sonority is involved in a cadence.

One of two vertical sonorities occurs 11 of the 14 times that G is used as the first note of a segment; an EGB triad (8 times) and a CEG triad (3 times). The vertical sonority that occurs the remaining three times that G is used as the first note of a segment can be interpreted as a dyad of one of these two triads. It is interesting to note that while G can be harmonized with a GBD triad, Obrecht never used this vertical sonority when G is used as the first note of a segment.

While Obrecht does not use all of the possible vertical sonorities available when G is the first note of a segment, the vertical sonority that occurs seven of the ten times that E is used as the first note of a segment is one of all three possible triads within the mode that include E as a chord member; EGB (three times), CEG (two times), and ACE (two times). The vertical sonority that occurs the remaining three times that E is used as the first note of a segment can be interpreted as a dyad of one of these three triads.

Statements of segments that use E as the first note are conspicuously absent in the middle section of Obrecht's Mass. While the Kyrie and the Agnus Dei each have three

statements of a segment that begin with E, the Gloria has only one statement of a segment that begins with E, and the Credo and Sanctus do not have any statements of a segment that begin with E.

The vertical sonority that occurs four of the five times that A is used as the first note of a segment is limited to A as a single pitch (including its octave equivalents); the remaining vertical sonority can be interpreted as a dyad of either an FAC triad or a DFA triad.

It is interesting to note that four of the five times Obrecht employs the single note A (and its octave equivalents) and does not use either a dyad of an ACE triad or a complete ACE triad as the vertical sonority that occurs when A is used as the first note of a segment. Clearly, Obrecht was weighing more aspects regarding the composition of this mass than simply supplying full sonorities when the opportunity presented itself. Perhaps the employment of the single note sonority in these instances allows the music to achieve a certain modal ambiguity that would not be possible with a fuller version of the intended chord.

All three statements of the segments that begin with B have a dyad of an EGB triad as the vertical sonority that occurs during the first note of the segment. Similar to the discussion mentioned above regarding the choice of sonority that occurs when A is used as the first note of a segment, Obrecht probably had the opportunity to employ a fuller sonority by using an EGB triad to harmonize with B, but instead used the thinner sound of a dyad of an EGB triad. Another vertical sonority that is available but never used by Obrecht for harmonization with B is the GBD triad; as was previously mentioned in the

discussion above, this sonority was also not employed by Obrecht when G was used as the first note of a segment.

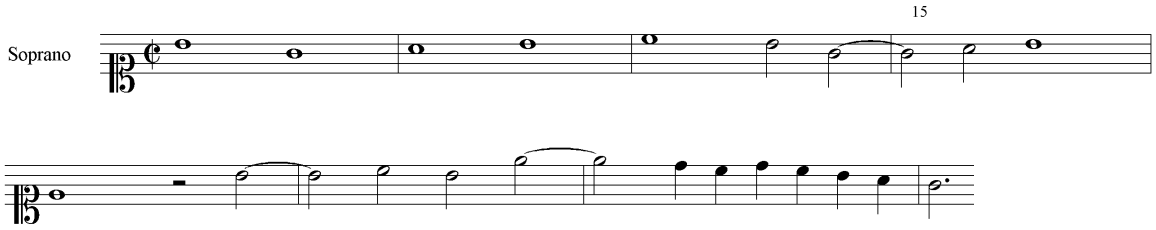
Although they occur with much less frequency, statements of segments that use A or B as their first note are found much more often in the middle section of Obrecht's Mass than statements of segments that use E as their first note.

Strictly looking at the frequency of all of the vertical sonorities that occur during the first note of the segments (without consideration of the pitch that begins the segment), we find eighteen instances of triads, ten instances of dyads, and three instances of single note sonorities (and its octave equivalents). There are only three different triads: EGB (eleven times), CEG (five times), and ACE (two times).

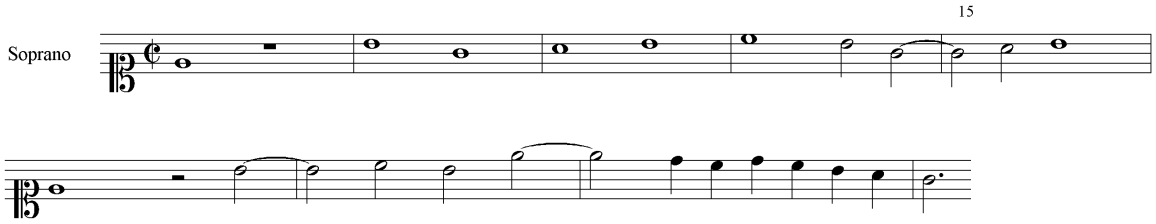
Dyads and single note sonorities can be interpreted as follows: dyad of EGB triad (six times), dyad of CEG triad (three times), dyad of ACE triad (two times) and single note sonority of ACE triad (three times), dyad of DFA triad (one time), and dyad of FAC triad (one time).

On a side note, it is curious that segment 3 is the only segment that does not begin its first note by repeating the last note of the segment that precedes it. Instead of following his usual plan in this mass of beginning the first note of a segment by repeating the last note of the segment that precedes it, Obrecht begins segment 3 with the note that follows the last note of segment 2 (see example 2). This results in segment 3 having B and not E as its first note.

Example 6. Chanson, measures 12 – 19 (soprano)

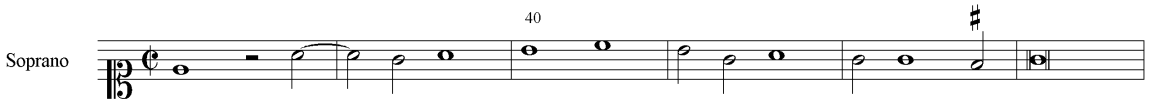


Example 7. Chanson, measures 11 – 19 (soprano)



It would not be difficult for segment 2 to keep E as its last note and have E as the first note of segment 3. Melodically this seems to create a somewhat problematic situation regarding the text, where the first note is immediately followed by a rest; nonetheless, a similar situation occurs at the beginning of segment 7.

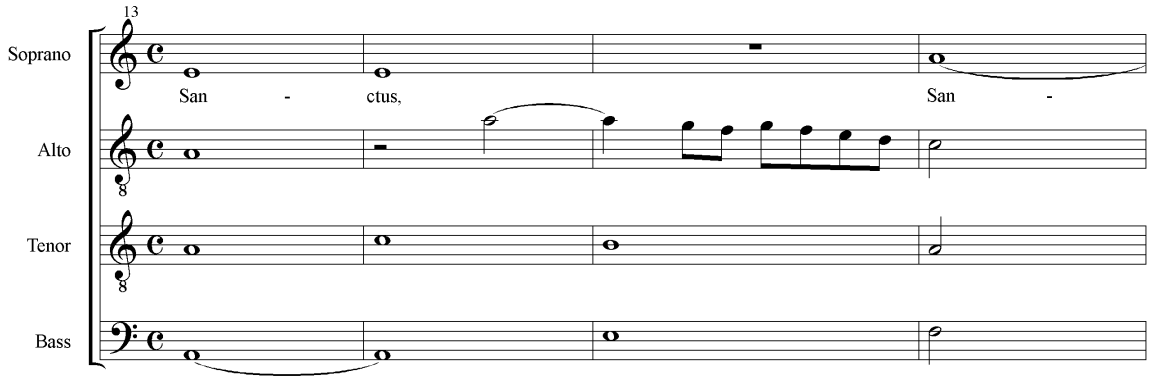
Example 8. Chanson, measures 38 – 43 (soprano)



Obrecht uses this segment for three statements in the soprano of the Sanctus. In the first statement of the segment, the first note is doubled; this technique allows Obrecht the

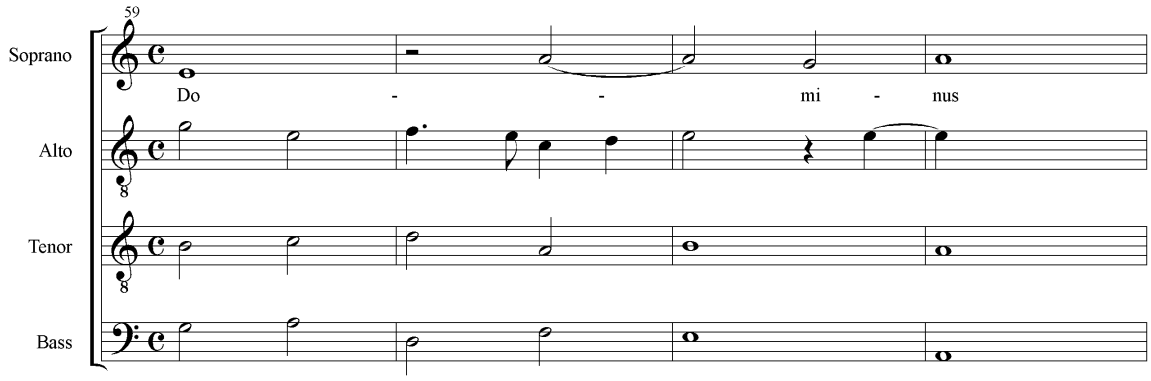
possibility of incorporating the two-syllable word “Sanctus.”

Example 9. Sanctus, measures 13 – 16 (soprano, alto, tenor, bass)

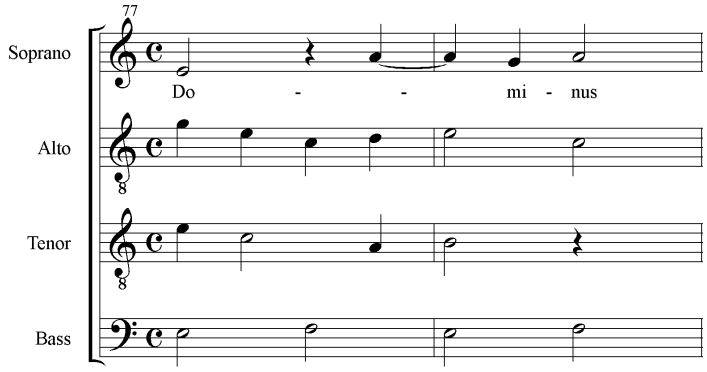


In the second and third statements of the segment, the first syllable of “Dominus” is carried through the rest.

Example 10. Sanctus, measures 59 – 63 (soprano, alto, tenor, bass)



Example 11. Sanctus, measures 77 – 78 (soprano, alto, tenor, bass)



Regarding this mass, Barton Hudson writes that

> Obrecht's texting seems to have been more rudimentary: probably no more than incipits were provided. Those scribes who sought to complete the underlay reached different solutions. The modern editor is presented with conflicting evidence, not received from the composer himself and with no particular claim to validity, and is placed in the same quandary as the early copyists. He must decide not only how to distribute the words but also which words to include and which to omit, since the available music will not accommodate all of them satisfactorily. Evidently, performance of the entire text was not envisioned by the composer, or perhaps he was simply careless about providing sufficient music for it.[5]

Despite the uncertainty regarding the setting of the text, the fact remains that on occasion Obrecht begins the statement of a segment with the first note immediately followed by a rest.

Harmonically, E could have been harmonized with the same vertical sonority as B (EB dyad or EGB triad); it is quite possible, then, that other considerations other than melodic and harmonic could have influenced Obrecht's decision regarding the segmentation of the soprano of the chanson for segment 3.

[5] Barton Hudson, "On the Texting of Obrecht's Masses," in *Musica Disciplina*, vol. 42 (1988): 120.

Out of 32 segments, 14 segments have at least a slight cadence that occurs on the first note of the segment. Obrecht uses only three pitches on which to cadence: E, A, and C. E is used most often (seven times), but only slightly more than A (six times), and finally C (one time). A comparison between last notes of segments and cadence pitches reveals that out of twenty-eight cadences, the last note of a cantus prius factus segment is one of the cadence voices four times, while the other ten times the last notes of two voices other than the cantus prius factus form the cadence. With this in mind, perhaps the following observation can be made concerning cadences at the beginning of segments: having cadences occur during the first note of segments is not a primary concern of Obrecht. When they do occur, a comparison between the frequency of cadences on E and A seems to suggest a modality that utilizes both the Phrygian and Aeolian modes. A discussion that confirms this Phrygian and Aeolian modality can be found in the following section "End of Segment."

End of Segment

An examination of the music in Obrecht's Mass shows that out of 32 segments, the ending of 20 segments are followed by rests. Of the twelve remaining segments, eight end a section (the last statements of all the segments in the soprano except segment 7, which instead is followed by a rest), three are followed by continuous segments (the first two statements of segment 2 and the first statement of the segment that occur in the bass of the Gloria), and one is followed by material unrelated to the cantus firmus (the first statement of segment 4 that occurs in the tenor of the Gloria).

Obrecht uses only three pitches for the last note of his segments: E, G, and A. E is used most often (fifteen times), followed by G (ten times), and finally A (seven times).

Since the last note of a segment is used as the first note of the next segment except for segment 3, at first glance it would seem that G would be the last note of a segment most frequently (see "Beginning of Segment" discussion above), but several factors contribute to change the frequency with which the last note of a segment occurs. These factors have an influence on the mode to some degree; whether this is Obrecht's primary goal is not clear. Perhaps other considerations are foremost in Obrecht's mind and the harmonic effect of these factors is simply of secondary importance.

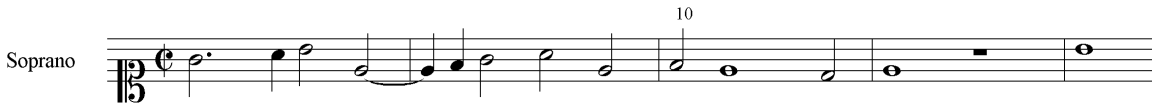
While segment 3 is the only segment that does not begin its first note by repeating the last note of the segment that precedes it and is the exception, it raises many questions regarding Obrecht's segmentation of the soprano of the chanson with respect to the consideration of mode. With this in mind, I will propose some scenarios in which the last note of segment 2 would be used as the first note of segment 3. The effect of these scenarios will be examined.

The scenario of keeping E as the last note of segment 2 and having E as the first note of segment 3 has already been discussed.

Another scenario is to have B as the last note of segment 2 and keep B as the first note of segment 3. This scenario has profound implications, both melodically and harmonically. Melodically, having B as the last note of segment 2 creates a somewhat problematic situation similar to the one that was discussed earlier, where the first note was immediately followed by a rest (see "Beginning of Segment" discussion above); this

time, though, it is the last note that would be immediately preceded by a rest.

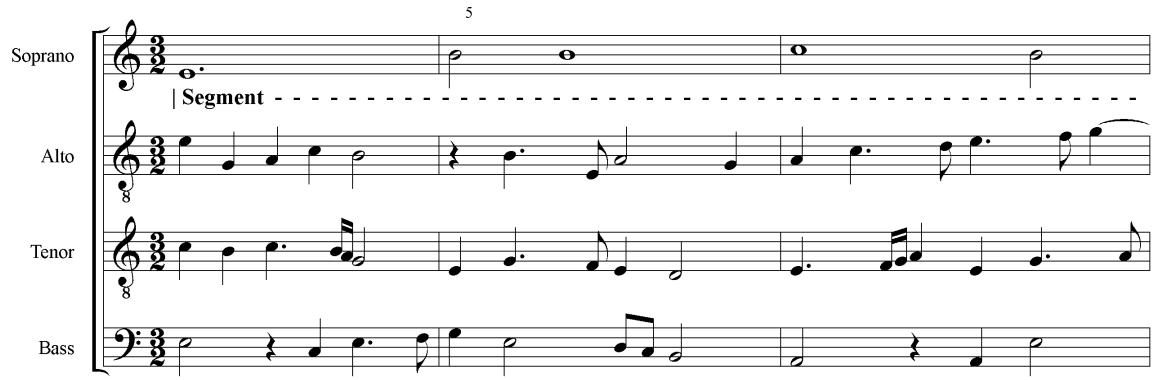
Example 12. Chanson, measures 8 – 12 (soprano)

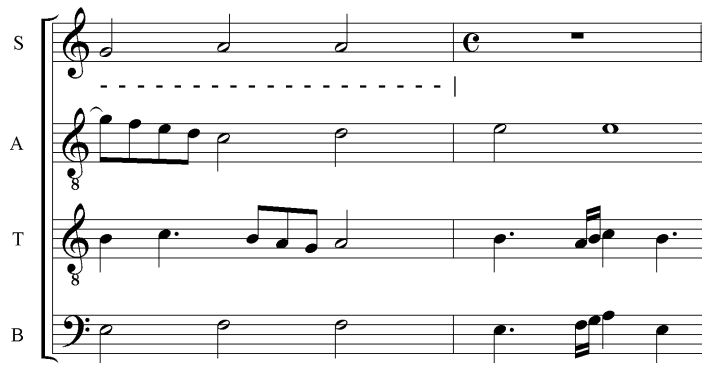


None of the other segments, however, has the last note preceded by a rest. As a matter of fact, the idea of having the last note of a segment preceded by a rest does not follow a basic systematic plan that Obrecht uses for the endings of his segments: the last note is always preceded by a note with stepwise motion.

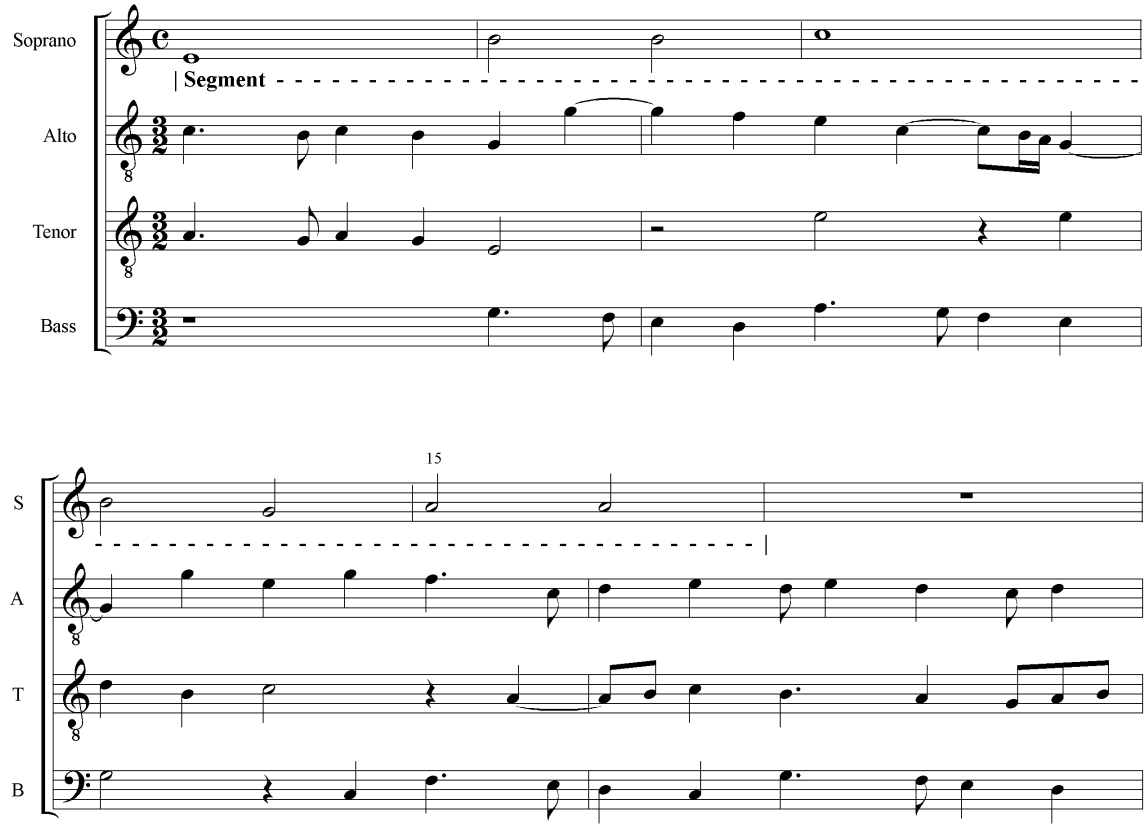
Only one section in the mass does not follow this plan in an exact manner. The first two statements of segment 1 in the soprano of the Kyrie have two A notes as the last two notes of their segments; it is only with third statement of segment 1 that the last note is preceded by a note in stepwise motion (A-G).

Example 13. Kyrie, measures 4 – 8 (soprano, alto, tenor, bass)

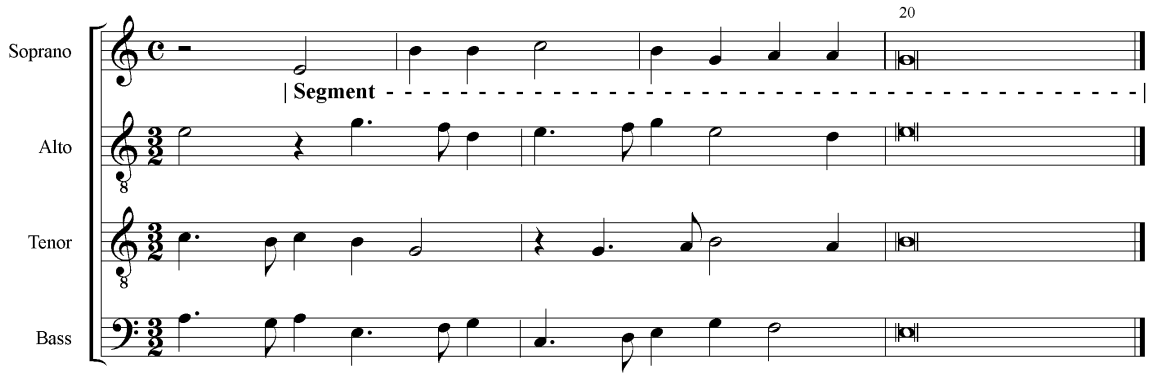




Example 14. Kyrie, measures 11 – 16 (soprano, alto, tenor, bass)



Example 15. Kyrie, measures 17 – 20 (soprano, alto, tenor, bass)



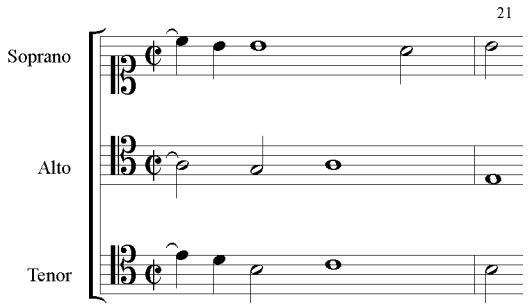
The G note has in effect been "added" to the end of the first two statements of segment 1; this is the note that follows the two A notes in mm. 11 – 12 in the soprano of the chanson. With the addition of the G note to the end of the segment, the first note of segment 2 is the last note of segment 1.

Otherwise, Obrecht is quite consistent with the plan of the last note of a segment being preceded by a note with stepwise motion. Taken separately, segments that have E as their last note are preceded by D or F; segments that have G as their last note are preceded by F or A, and segments that have A as their last note are preceded by G or A.

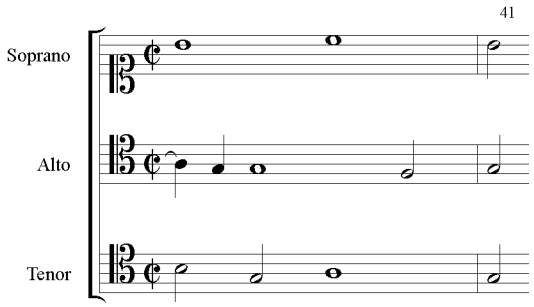
But even if Obrecht's criteria for establishing the ending of his segments required stepwise motion between the two pitches (which would disqualify B being the last note of segment 2, since it would be preceded by a rest), there are at least two locations in the soprano of the chanson where a segment can have B as its last note and be preceded by stepwise motion; in m. 21, B is preceded by A (in the chanson there is also a cadence on B in m. 21), and m. 41, B is preceded by C (in the chanson there is also a cadence on G

with B in the soprano in m. 41).

Example 16. Chanson, measures 20 – 21 (soprano, alto, tenor)



Example 17. Chanson, measures 40 – 41 (soprano, alto, tenor)



It would not be difficult to harmonize B as the last note of a segment. An EGB triad (or a dyad of an EGB triad, for that matter) would work; a GBD triad would also be possible, but Obrecht uses this vertical sonority only once with the last note of a segment, even when the opportunity presents itself (see discussion below).

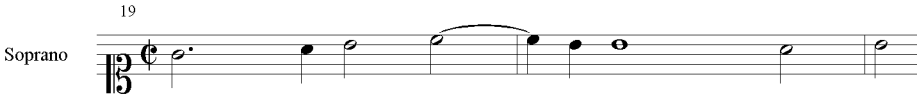
At any rate, whether Obrecht intentionally avoided B as the last note of his segments or its lack of appearance is totally coincidental, it would appear that the consideration of mode only partially explains the segmentation process employed by Obrecht. The

discussion above seems to suggest that Obrecht could have segmented the soprano of the chanson differently and still maintained the mode.

Indeed, there are other aspects of the segmentation process that must be considered. Regarding this mass, Edgar Sparks writes that Obrecht often ignores the natural divisions of the melody in the process of dividing it up, not only to have each segment end on a note which will fit into a cadence appropriate to the tonal scheme of the mass, but to apportion the fund of notes provided by the original melody in such a way that it will not be exhausted until the entire mass is substantially completed.[6]

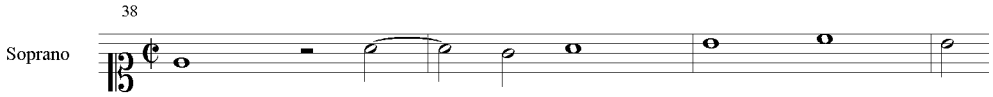
For example, if a different segmentation of the soprano of the chanson is employed so that B is the last note of a segment as was mentioned earlier, it can be seen that segment 4 (providing the beginning remains the same) would be mm. 19 – 21 in the soprano of the chanson; segment 7 (providing the beginning remains the same) would be mm. 38 – 41 in the soprano of the chanson.

Example 18. Chanson, measures 19 – 21 (soprano)



[6] Edgar H. Sparks, *Cantus Firmus in Mass and Motet, 1420 – 1520* (Berkeley and Los Angeles: University of California Press, 1963), 262.

Example 19. Chanson, measures 38 – 41 (soprano)



Both are much too short to provide enough music to support the text.

The idea of segmenting the soprano of the chanson into a different number of segments is a possibility, but it seems that Obrecht had a reason for dividing the cantus firmus into nine segments. This number does not seem to be arbitrary; there are other segmentation masses besides *Malheur me bat* in which the cantus firmus is divided into nine segments (*Missa Rose playsante*, *Missa Si dedero*, *Missa Maria zart*, to name a few). Willem Elders explains that in the Middle Ages, man's sinful condition was connected with the number nine: "The principal allegorical interpretation of this number was derived from the parable of the lost drachma as told by Jesus to illustrate God's mercy (Luke 15: 8 - 10)."[7]

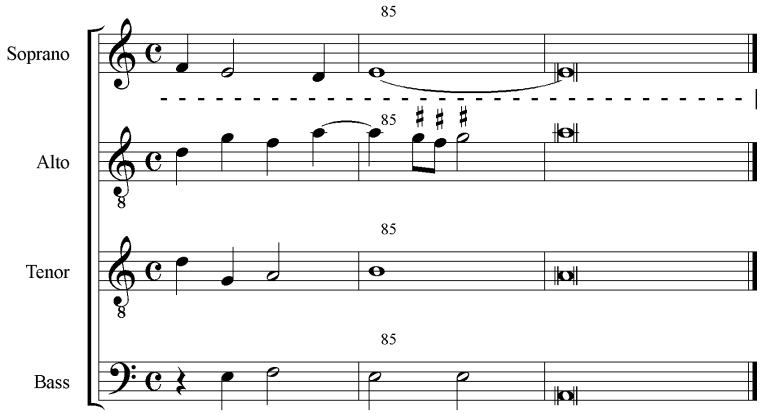
A closer examination of the plan to have stepwise motion occur between the last note and the note that precedes it seems to give some indication that it allowed Obrecht the opportunity to have the last note of the cantus prius factus segment cadence with another voice. Out of 32 segments, 27 segments have at least a slight cadence that occurs on the last note of the segment. Clearly, having cadences occur at the end of segments is an important consideration in this mass. Obrecht uses only four pitches on which to

[7] Willem Elders, *Symbolic Scores: Studies in the Music of the Renaissance* (New York: E. J. Brill, 1994), 66.

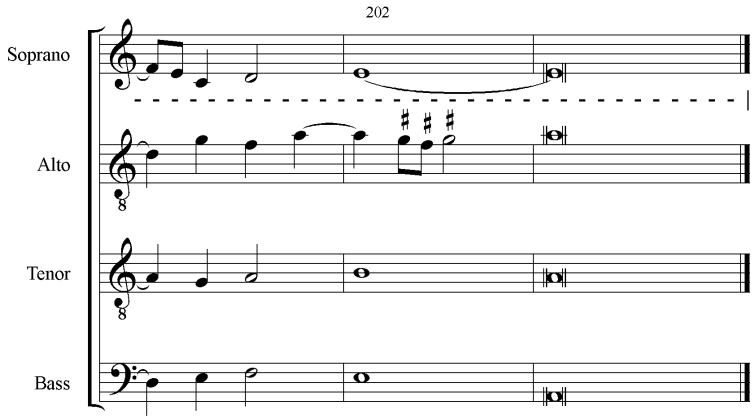
cadence: E, A, G, and C. E is used most often (fourteen times), followed by A (six times), then G (three times), and finally C (one time).

From the segmentation chart, it will be noticed that there are instances of cadences that contain a slashed line between what would ordinarily be considered two separate cadences. These have been considered a special case. There are three instances of such sonorities: one occurs at the end of the third statement of segment 2, one at the end of the third statement of segment 8, and one at the end of the third statement of segment 9.

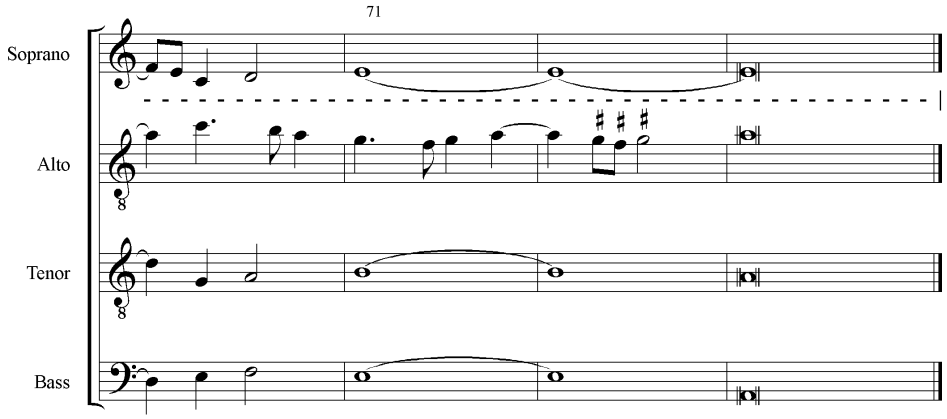
Example 20. Kyrie, measures 84 – 86 (soprano, alto, tenor, bass)



Example 21. Sanctus, measures 201 – 203 (soprano, alto, tenor, bass)



Example 22. Agnus Dei, measures 70 – 73 (soprano, alto, tenor, bass)



All of these cadences begin with the bass and soprano voices forming a cadence on E, with the last note of the cantus prius factus segment in the soprano. The soprano note is sustained long enough so that after the bass and soprano voices cadence on E the alto and tenor voices form a cadence on A. These cadences are the foundation for three of the five dual vertical sonorities that help to give the music of Obrecht's Mass a

modality that utilizes both the Phrygian and Aeolian modes (see discussion below).

A comparison between last notes of segments and cadence pitches reveals that out of 27 cadences, the last note of a cantus prius factus segment is one of the cadence voices 19 times, while the other 8 times the last notes of two voices other than the cantus prius factus form the cadence. In other words, while the stepwise motion between the last two notes of a cantus prius factus segment always provides an easy opportunity to form cadences with other voices, sometimes that option is not exercised.

With E given so much prominence as a last note of a segment and as a cadence pitch, it might appear that the Phrygian mode would be dominant. However, it is the vertical sonorities that occur during the last note of the segments that are probably most responsible for Obrecht's Mass having a modality that combines the Phrygian and Aeolian modes (the effect of the dual cadences has already been mentioned).

Strictly looking at the frequency of all of the vertical sonorities that occur during the last note of the segments (without consideration of the pitch that ends the segment), we find eighteen instances of triads, eight instances of dyads, and one instance of a single note sonority (and its octave equivalents). There are five different triads: EGB (nine times), ACE (three times), CEG (three times), DFA (two times) and GBD (one time).

Dyads and single note sonorities will be interpreted as follows: dyad of ACE triad (six times) and single note sonority of ACE triad (one time), dyad of EGB triad (two times), dyad of CEG triad (two times), and dyad of FAC triad (one time). (For a discussion of the interpretation of dyads and single note sonorities, see "Beginning of Segment" section above.)

From the segmentation chart, it will be noticed that there are instances of vertical sonorities that contain a slashed line between what would ordinarily be considered two separate sonorities. These have been considered a special case. There are five instances of such sonorities: one at the end of the third statement of segment 2, one at the end of the third statement of segment 6, one at the end of the third statement of segment 8, one at the end of the first statement of segment 9, and one at the end of the last statement of segment 9 (see examples 20 – 22). All of these vertical sonorities are essentially ACE sonorities (ACE triad or dyad of ACE triad) that occur after a passing EGB sonority (EGB triad or dyad of EGB triad). In all of the instances, the last note of the cantus prius factus segment is always E and is sustained long enough so that the EGB sonority that is formed in the other voices changes quickly to form an ACE sonority. Four of the five instances not only occur at the end of the third statement of a segment, but in fact occur at the end of a part of the mass.

Rests Between Segments

Early in this study, ground rules were established that only the process by which a composer extracts sections would be considered for examination. While one might initially see the rests that occur between the segments as being outside the boundary of this study, they are in fact an integral part of Obrecht's process of segmentation in this mass.

After a close examination of last notes of segments that showed a proportional relationship consisting of a 3:2 ratio (see "Length of Segment" discussion above), the

idea that the rests that occur between the segments may have a proportional relationship as well became a possibility. It was mentioned earlier by Reese that the cantus firmus was assigned to the soprano throughout (see "Location of Segment" discussion above). The plan that Obrecht follows for this mass basically assigns three different elements to the soprano voice: the segment excluding the last note, the last note of the segment as an independent entity, and the rests that occur between the segments. Material unrelated to the cantus firmus always appears in voices other than the soprano. There are definite proportional relationships involving the rests that occur between the segments in the soprano, the same ratios that occur between the last notes of the segments (see "Length of Segment" discussion above).

Table 4
Rests Between Segments Chart

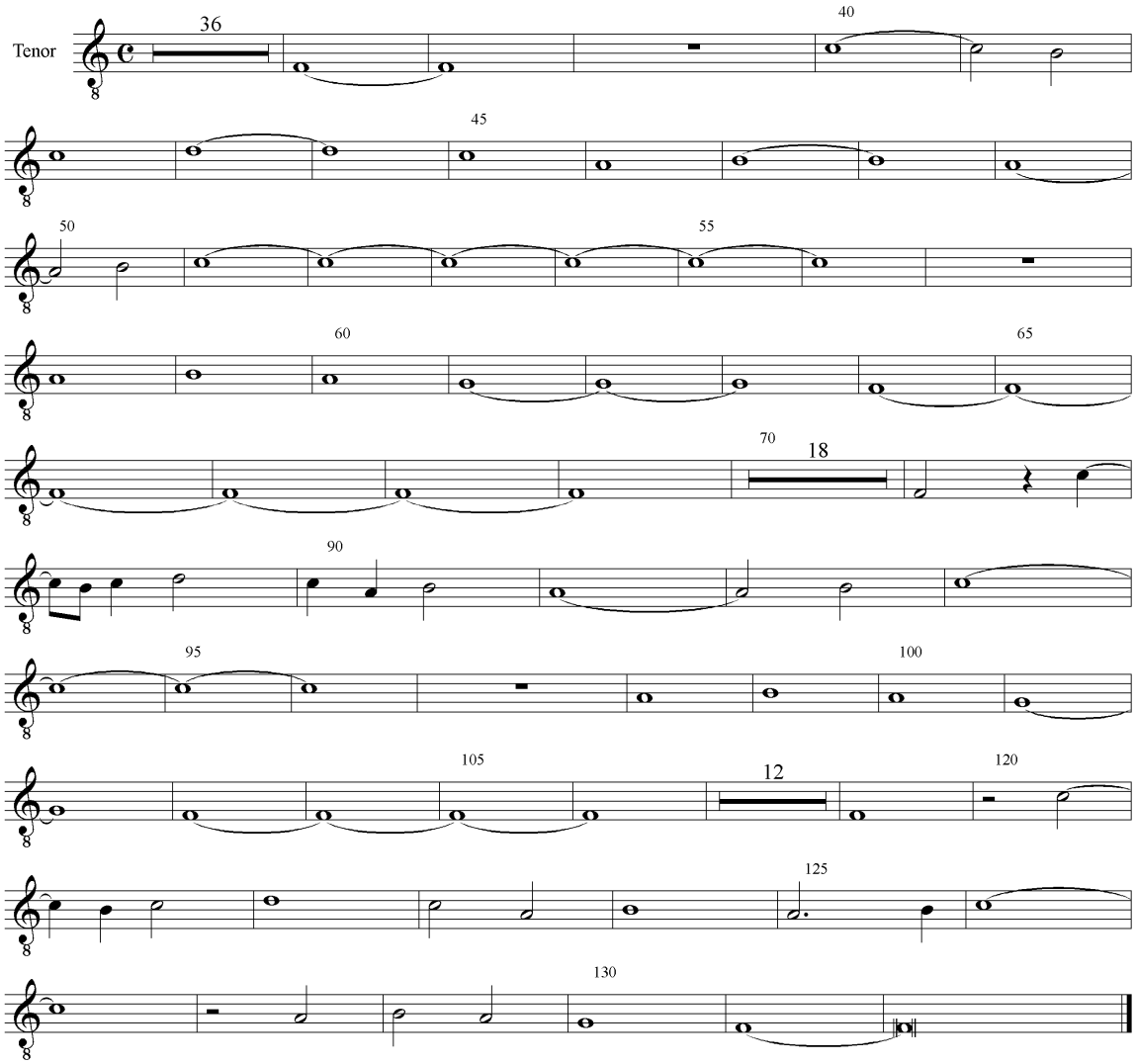
	Part	Measures	Length	Proportional Relationships
1	Kyrie	1 - 3	18	6:12 = 1:2; 6:18 = 1:3; 12:18 = 2:3
2	Kyrie	8 - 10	12	
3	Kyrie	16 - 17	6	
4	Gloria	1 - 30	120	20:40 = 1:2; 20:120 = 1:6; 40:120 = 1:3
5	Gloria	73 - 82	40	
6	Gloria	99 - 103	20	
7	Gloria	112 - 147	144	24:48 = 1:2; 24:144 = 1:6; 48:144 = 1:3
8	Gloria	184 - 195	48	
9	Gloria	212 - 217	24	
10	Credo	1 - 36	144	48:72 = 2:3; 48:144 = 1:3; 72:144 = 1:2
11	Credo	62 - 79	72	
12	Credo	93 - 104	48	
13	Credo	118 - 141	96	16:32 =1:2; 16:48 =1:3; 16:96 = 1:6; 32:48 = 2:3; 32:96 = 1:3; 48:96 = 1:2
14	Credo	172 - 183	48	
15	Credo	199 - 206	32	
16	Credo	219 - 222	16	
17	Sanctus	1 - 12	48	12:24 = 1:2; 12:48 = 1:4; 24:48 = 1:2; 48:64 = 3:4
18	Sanctus	43 - 58	64	
19	Sanctus	71 - 76	24	
20	Sanctus	83 - 85	12	
21	Sanctus	155 - 163	36	6:12 = 1:2; 6:36 = 1:6; 12:36 = 1:3
22	Sanctus	185 - 187	12	
23	Sanctus	197 - 198	6	

It can be seen, then, that the rests that occur between the segments in the soprano are an integral part of the structural plan that Obrecht employs in this mass.

An example of Obrecht's use of proportional relationships with both a 2:1 (36:18) and 3:2 (18:12) ratio involving rests that occur between cantus prius factus segments of a

particular voice can be found in the tenor of the Credo in *Missa Rose playsante*:

Example 23. Credo, measures 1 – 132 (tenor)



CHAPTER IV

MASS BY JOSQUIN

Location in Mass; Location in Chanson

In Josquin's Mass, the segmentation of a voice from the chanson only occurs in the Kyrie, Gloria, the Patrem omnipotentem and the Et incarnatus sections of the Credo, and the Benedictus. In the parts of the mass where segmentation occurs, there is a different plan that Josquin employs for each part of the mass.

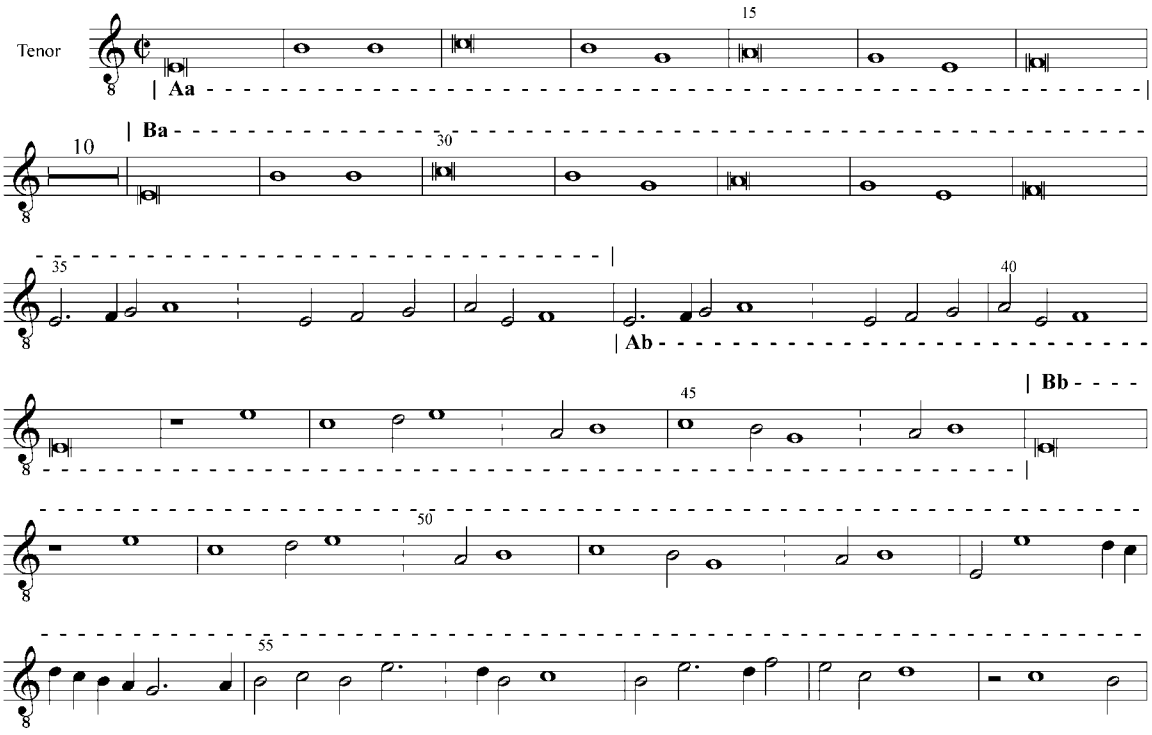
The segmentation plan employed in the Kyrie incorporates a proportional relationship in which statements of segments divide the Kyrie I and the Christe into two corresponding parts. The first eleven measures of the tenor of the chanson is quoted exactly by the soprano in the mass; this segment is then repeated in the tenor in mm. 11 – 22, and continues its quotation of the chanson in the alto from m. 23 to m. 43. The quotation in the alto from mm. 23 – 43 is then in turn repeated in the tenor from m. 42 to the end of the Kyrie. Because of this plan of quotation, the soprano and alto duo in the Kyrie I is repeated exactly by the tenor and bass so that the section divides into two exactly equal parts. The Christe is also divided into two parts by the repeated quotation, but the segments do not have the exact same length; nonetheless, the symmetry between the parts is evident.

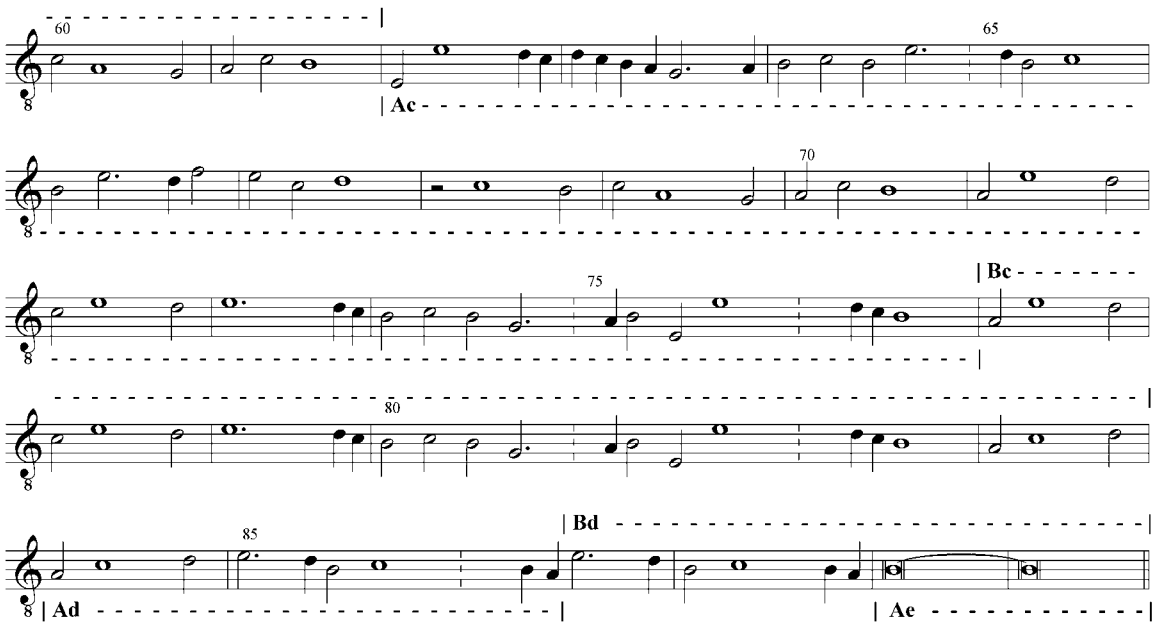
After an initial statement of the first eleven measures of the soprano of the chanson

by the soprano in the Gloria, a segmentation plan is employed in which the entire tenor of the chanson is quoted two times. The segments that comprise each of the two quotations interlock with each other so that every other segment is a continuation of either of the two quotations from the entire tenor of the chanson.

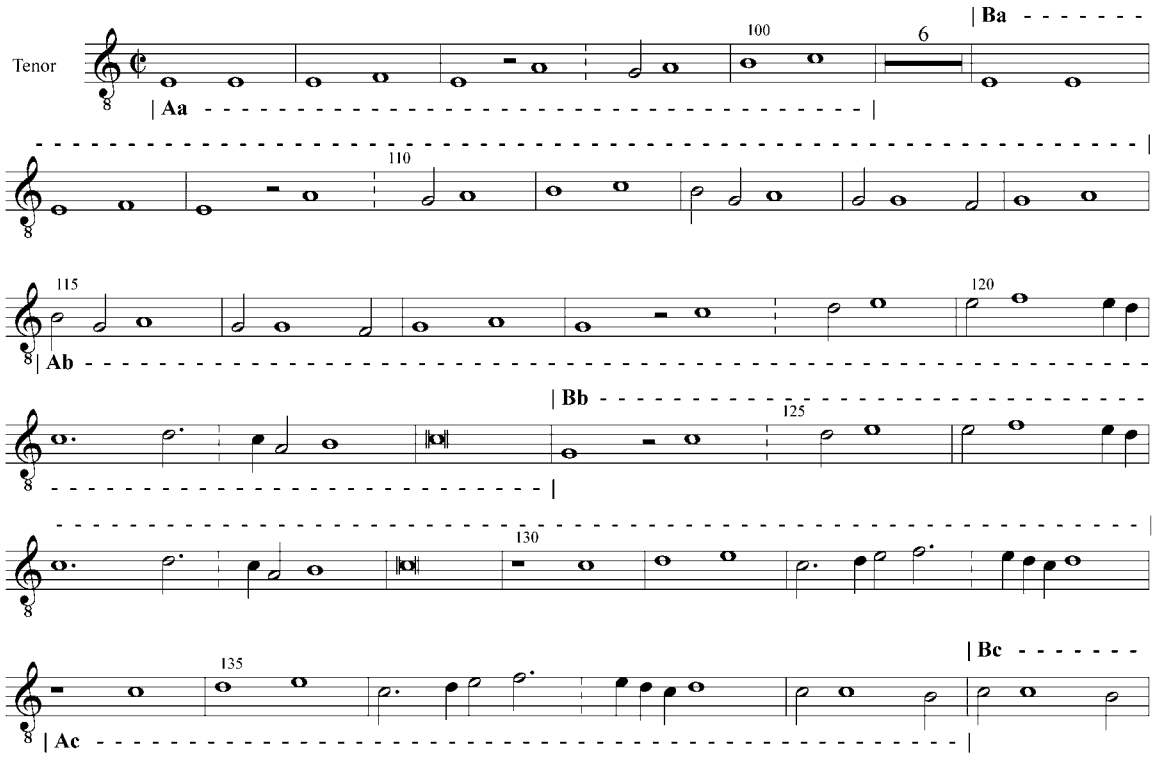
In example 24 and example 25, segments have been designated as either an A or B segment; it can be seen that the connection of the A segments combines to form one entire quotation of the tenor of the chanson, and the connection of the B segments combines to form another entire quotation of the tenor of the chanson.

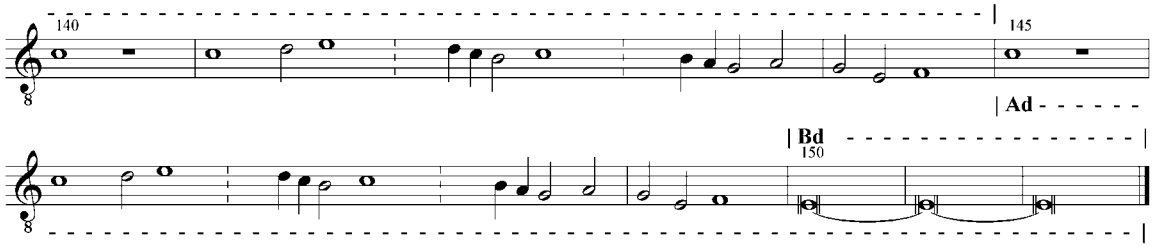
Example 24. Gloria, measures 11 – 89 (tenor)





Example 25. Gloria, measures 96 – 152 (tenor)

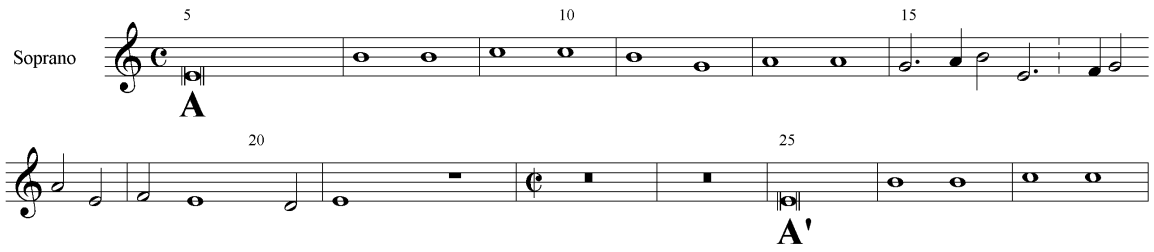


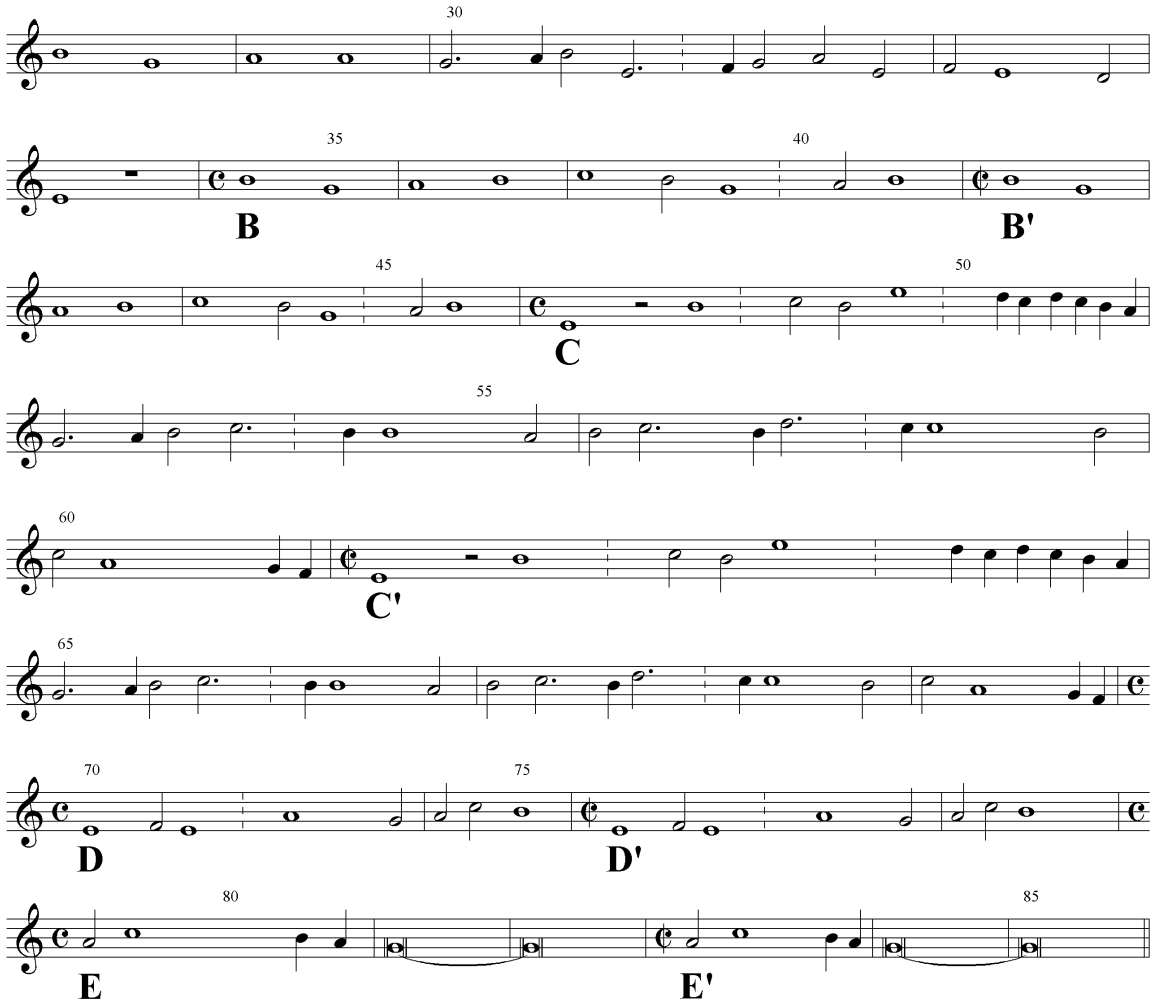


There are two different segmentation processes that are employed in the Credo: the eighty-five measures of the soprano in the Patrem omnipotentem section quotes the first twenty-eight measures of the soprano of the chanson, dividing it into five segments. Each of the five segments is first given in original note values, then in regular augmentation. This creates a 2:1 proportional relationship between the two statements of each segment. The sixty-nine measures of the soprano in the Et incarnatus section divides the remaining thirty-one measures of the soprano of the chanson into six segments, with each of the first five segments repeated.

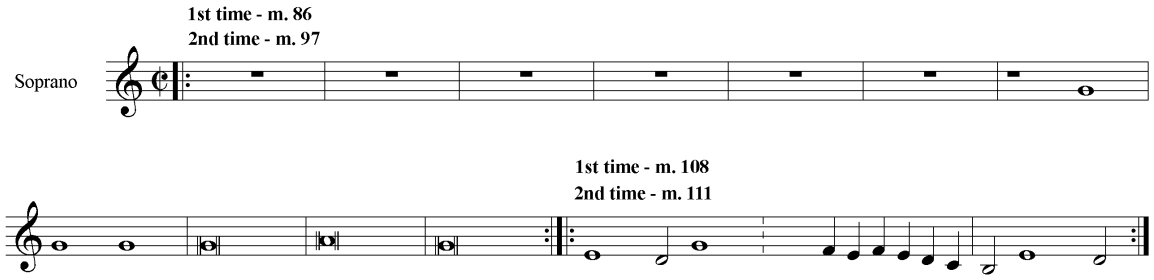
In example 26, the letters A, B, C, D, and E represent the first time each of the five segments appear in one mensuration, the letters A', B', C', D', and E' represent the repeat of each segment (A and A', B and B', etc.) but in another mensuration.

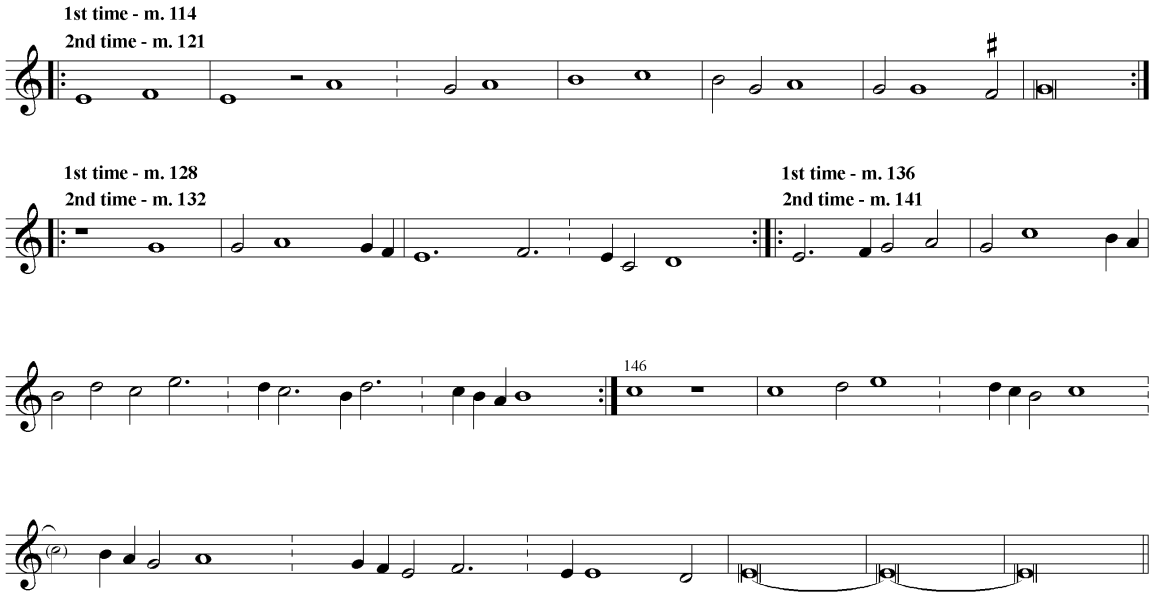
Example 26. Credo, measures 5 – 85 (soprano)





Example 27. Credo, measures 86 – 154 (soprano)





The segmentation process employed in the Benedictus simply repeats the first eleven measures of the alto of the chanson three times in the alto at three different pitch levels, with the first statement of the segment is in the Phrygian mode, the second in the Dorian mode, and the third in the Aeolian mode.

Length of Segment

Except for segments in the Credo (see "Location of Segment" discussion above), the length of the segments in Josquin's Mass are identical to the length of the corresponding segments in the chanson; the only discrepancy occurs in the last notes. (For an explanation of differences in length between the last note of segments in a mass and the last note of corresponding segments in the chanson, see "Explanation of the Segmentation Chart: Length of Segment" section).

Beginning of Segment

Because the segments in Josquin's Mass are usually connected to other segments, the effect of certain aspects pertaining to the beginning of the segment have been minimized while the effect of other aspects pertaining to the beginning of the segment becomes more pronounced.

Josquin uses every pitch of the Phrygian mode except F for the beginning notes of his segments. E is used most often (twenty-seven times), followed by A (five times), then B and C (three times each) and finally G and D (one time each). A rest is used as the beginning of a segment the remaining five times.

The note E is by far the note Josquin uses most often at the beginning of his segments. While the connection of segments to each other greatly reduces the amount of times E is heard as the first note of a segment, it is still prominently heard as the first note of the segment thirteen of the twenty-seven times. In ten of these instances, a rest precedes the first note of the segment. Of these ten instances, three occur during the Kyrie (one during Kyrie I, one during the Christe, and one during Kyrie II), five during the Gloria (three during the Et in terra section and two in the Qui tollis section), and two during the Credo. These instances do not occur at random, but instead have their entrances occur at the beginning of their respective sections. In the other three instances, the section begins with the statement of the segment. Of these three instances, two occur during the Kyrie (one during Kyrie I and one during Kyrie II) and one during the first statement of the segment in the Benedictus. Although the amount of times E is

prominently heard as the first note of the segment has been limited to thirteen instances, their consistent placement at the beginning of sections allows them to play an important part in establishing the Phrygian mode in Josquin's Mass.

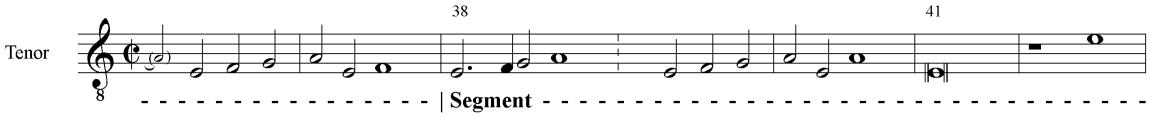
Besides the establishment of mode, the frequency with which E is the first note of a segment also facilitates in the connection of non-continuous segments, a technique that Josquin employs often, especially in the Gloria and Credo. An analysis of the connection of non-continuous segments in Josquin's Mass shows that while Josquin does not always require that the beginning and endings of non-continuous segments have similar characteristics, it certainly helps in keeping the integrity of the music intact. Often Josquin will connect non-continuous segments by reinterpreting the connection point as it occurs in the chanson or even the mass itself (i.e., the last note of a segment can be reinterpreted as the first note of any non-continuous segment that follows it). The employment of this technique makes it much more difficult for the listener to recognize that the music has employed the connection of two non-continuous segments, since segments with exact quotations from the chanson are interspersed with these non-consecutive segments.

Out of 45 segments, 19 are preceded by a non-continuous segment, 12 by a rest, and 9 by a continuous segment. The remaining five segments begin their respective sections and do not have a preceding event. Of the nineteen segments that are preceded by a non-continuous segment, four connections of non-continuous segments (two in the Gloria and two in the Credo) utilize E as the connecting note.

In example 28, m. 37 is the end of a segment that began at m. 28, and m. 38 is the

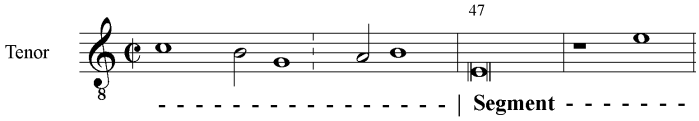
beginning of another segment that connects to the end of the preceding segment. Later during this second segment the same ending of the preceding segment reappears (compare mm. 37 - 38 and mm. 39 - 40). While the first segment ends its quotation from the chanson at this point, the second segment continues on with its quotation of the chanson (shown in mm. 41 – 42). It can be seen, then, that the E in m. 38 would have been the next note to follow m. 37 had the quotation from the chanson continued on in the first segment.

Example 28. Gloria, measures 36 – 42 (tenor)

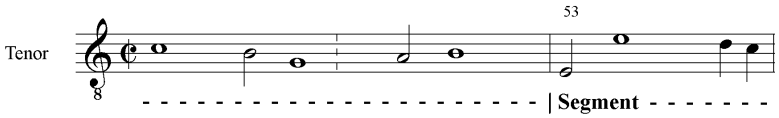


In example 29 and example 30, the first segment ends at m. 46, and the second segment begins at m. 47 and continues on with its quotation of the chanson (shown in mm. 47 – 48 of example 29 and later in mm. 51 – 53 of example 30). The connection point is the E in m. 47 (compare the E in m. 47 in example 29 that begins the second segment with the E in m. 53 of example 30 that occurs later in the second segment during its continuation of the chanson).

Example 29. Gloria, measures 45 – 48 (tenor)

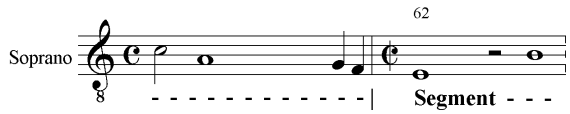


Example 30. Gloria, measures 51 – 53 (tenor)

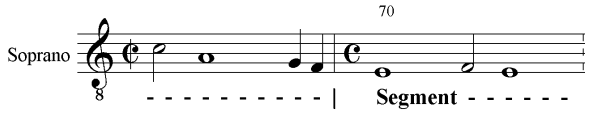


In example 31 and example 32, the first segment ends at m. 61, and the second segment begins at m. 62 and continues on with its quotation of the chanson (shown in m. 62 of example 31 and later in mm. 69 - 70 of example 32). The connection point is the E in m. 62 (compare the E in m. 62 of example 31 that begins the second segment with the E in m. 70 of example 32 that occurs later in the second segment during its continuation of the chanson).

Example 31. Credo, measures 61 – 62 (soprano)



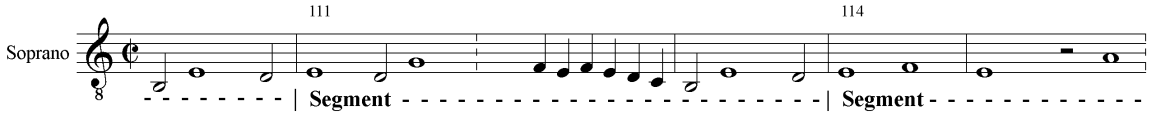
Example 32. Credo, measures 69 – 70 (soprano)



In example 33, the first segment ends at m. 110, and the second segment begins at m. 111 and continues on with its quotation of the chanson (shown in mm. 111 - 115 of example 33). The connection point is the E in m. 111 (compare the E in m. 111 that

begins the second segment with the E in m. 114 that occurs later in the second segment during its continuation of the chanson).

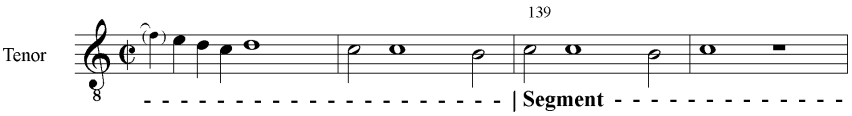
Example 33. Credo, measures 110 – 115 (soprano)



In only one instance does Josquin utilize a pitch other than E as a connecting note; in this instance C is used.

In example 34, the first segment ends at m. 138, and the second segment begins at m. 139 and continues with its quotation of the chanson. The connection point is the C in m. 139 (compare the C in m. 139 that begins the second segment with the C in m. 140 that occurs only a measure later in the second segment during its continuation of the chanson).

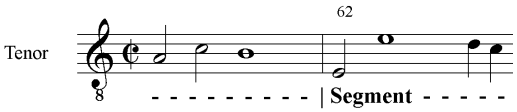
Example 34. Gloria, measures 137 – 140 (tenor)



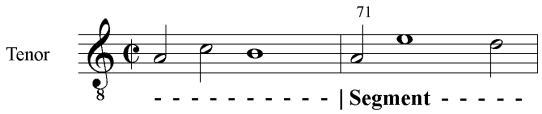
While notes can be utilized as the connection point between two non-continuous segments, it is also possible that similar melodic contour and rhythm can serve as a connection point. This type of connection occurs two times in the Gloria.

In example 35 and example 36, the first segment ends at m. 61, and the second segment begins at m. 62 and continues on with its quotation of the chanson (shown in m. 62 of example 35 and later in mm. 70 - 71 of example 36). The connection point occurs in m. 62 (compare the melodic contour and rhythm in m. 62 of example 35 that occurs at the beginning of the second segment with the melodic contour and rhythm in m. 71 of example 36 that occurs later in the second segment during its continuation of the chanson).

Example 35. Gloria, measures 61 – 62 (tenor)



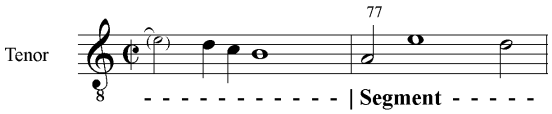
Example 36. Gloria, measures 70 – 71 (tenor)



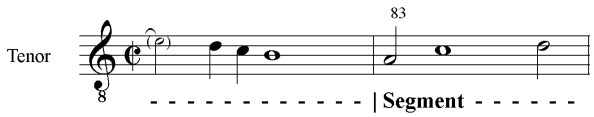
In example 37 and example 38, the first segment ends at m. 76, and the second segment begins at m. 77 and continues on with its quotation of the chanson (shown in m. 77 of example 37 and later in mm. 82 - 83 of example 38). The connection point occurs in m. 77 (compare the melodic contour and rhythm in m. 77 of example 37 that occurs at the beginning of the second segment with the melodic contour and rhythm in m. 83 of example 38 that occurs later in the second segment during its continuation of the

chanson).

Example 37. Gloria, measures 76 – 77 (tenor)



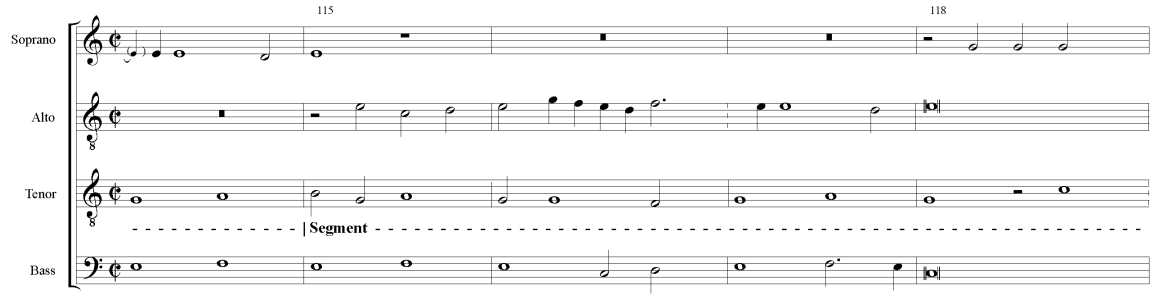
Example 38. Gloria, measures 82 – 83 (tenor)



So far, all of the connection points have their origins in the chanson. However, it is possible that even similar harmony formed in voices other than the cantus prius factus can serve as a connection point. This type of connection occurs three times in the Gloria.

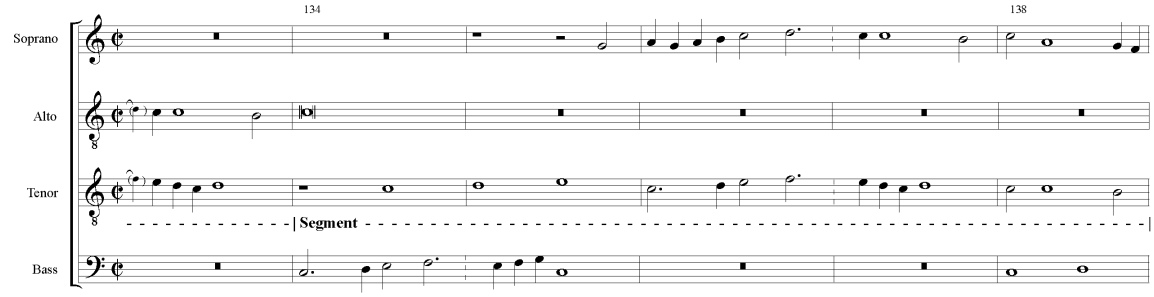
In example 39, the first segment in the tenor ends at m. 114, and the second segment in the tenor begins at m. 115 and continues on with its quotation of the chanson (shown in mm. 115 - 118 of example 39). The connection point occurs in m. 114 (compare the cadential preparation in the soprano in m. 114 of example 39 that occurs at the end of the first segment with the cadential preparation in the alto in m. 117 of example 39 that occurs later in the second segment during its continuation of the chanson).

Example 39. Gloria, measures 114 – 118 (soprano, alto, tenor, bass)



In example 40, the first segment in the tenor ends at m. 133, and the second segment in the tenor begins at m. 134 and continues on with its quotation of the chanson (shown in mm. 134 - 138 of example 40). The connection point occurs in m. 133 (compare the cadential preparation in the alto in m. 114 of example 40 that occurs at the end of the first segment with the cadential preparation in the soprano in m. 137 of example 40 that occurs later in the second segment during its continuation of the chanson).

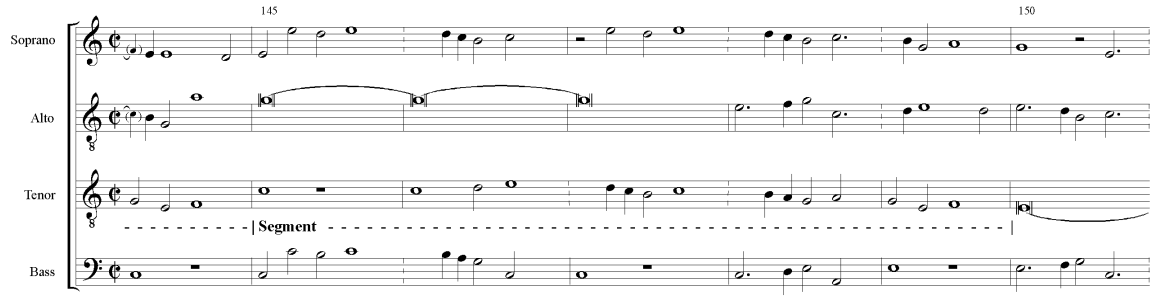
Example 40. Gloria, measures 133 – 138 (soprano, alto, tenor, bass)



In example 41, the first segment in the tenor ends at m. 144, and the second segment in the tenor begins at m. 145 and continues on with its quotation of the chanson (shown in

mm. 145 - 150 of example 41). The connection point occurs in m. 144 (compare the cadential preparation in the soprano in m. 144 of example 41 that occurs at the end of the first segment with the cadential preparation in the alto in m. 149 of example 41 that occurs later in the second segment during its continuation of the chanson).

Example 41. Gloria, measures 144 – 150 (soprano, alto, tenor, bass)



It has already been discussed that the connection of segments minimizes the effect of certain aspects pertaining to the beginning of a segment. Certainly, this is the case with vertical sonorities and cadences that occur at the beginning of a segment in Josquin's Mass. While vertical sonorities obviously still occur at the beginning of the segment, their effect has been minimized since they are subsumed with the connection of segments.

Strictly looking at the frequency of all of the vertical sonorities that occur during the first note of the segments, we find 18 instances of triads, 16 instances of dyads, and 11 instances of single note sonorities (and its octave equivalents). There are four different triads: CEG (six times), EGB (five times), and ACE (four times), and FAC (three times).

Dyads and single note sonorities can be interpreted as follows: dyad of EGB triad

(nine times) and single note sonority of EGB triad (seven times), dyad of CEG triad (thirteen times) and single note sonority of CEG triad (one time), dyad of ACE triad (seven times) and single note sonority of ACE triad (one time), dyad of GBD triad (two times), D single note sonority (one time), and B single note sonority (one time).

Out of forty-five segments, only nine segments have at least a slight cadence that occurs on the first note of the segment. Josquin uses only three pitches on which to cadence: E, C, and G. E is used more often (six times), followed by C (two times), and finally G (one time).

Although EGB occurs slightly more often than CEG as the vertical most often used at the beginning of a segment, the connection of segments creates a situation in which these sonorities are not given any special emphasis; therefore, they have no more significance than any other EGB or CEG vertical sonority. This is especially reinforced by the fact that while E has a clear majority over any other pitch as the cadence that occurs most often at the beginning of a segment, cadences rarely occur at the beginning of a segment in the first place.

End of Segment

Before examining the aspects pertaining to the end of segments in detail, a decision needed to be made regarding a special case involving two particular pitches; the B that occurs in m. 88 in the tenor of the Gloria and the E that occurs in m. 150 in the tenor of the Gloria. In the "Location in Mass; Location in Chanson" discussion above, Reese states that "the chanson tenor is merely quoted twice through;" however, Josquin has a

unique way of ending these segments. A close examination of the music reveals that these two pitches are not only the last note of one segment; they are the last note of two segments. In other words, each of these notes is doing "double duty" as the last note of two segments. B is the last note of a segment that begins at m. 84 and ends at m. 86, and of a segment that begins at m. 86 and ends at m. 87. Likewise, E is the last note of a segment that begins at m. 139 and ends at m. 144, and of a segment that begins at m. 145 and ends at m. 149. Since they consist of only one note, this study does not classify them as a segment, and therefore are not included on the segmentation chart; nonetheless, it will be seen in later discussions that they play an important part in the structural plan for this mass (see example 24 and example 25).

Much of the discussion pertaining to aspects at the beginning of a segment mentioned earlier applies to aspects pertaining to the end of a segment as well. With the connection of segments, the beginning of a segment that follows the end of another segment has a direct influence that both minimizes and enhances the effect of certain aspects pertaining to the end of a segment.

Every pitch of the Phrygian mode is used for the last notes of segments in this mass. B is used most often (twelve times), followed by E (eight times), then D, F, and G (six times each), closely followed by A (five times), and finally C (two times). However, a closer examination shows that the connection of segments to each other greatly reduces the amount of times B is heard as the last note of a segment. In fact, not even one segment that has B as its last note is followed by a rest, and only three times does a segment with B as its last note appear at the end of a section (the second segment in the

Christe, the note occurring in m. 88 in the tenor of the Gloria that ends the Et in terra section, and the first statement of the segment in the Benedictus).

In the discussion on "Beginning of Segment," E was seen as the prominent note as the first note of a segment due to its consistent placement at the beginning of sections; by the same token, E emerges as the prominent note as the last note of a segment due to its consistent placement at the end of sections. The establishment of the Phrygian mode in Josquin's Mass, which was first seen in the consistent placement of segments that have E as their first note at the beginning of sections, is further reinforced by the placement of segments with E as their last note at the end of sections. Five of the eight segments that end a section have E as their last note (the first segment in Kyrie I, the segment in Kyrie II, the note occurring in m. 151 in the tenor of the Gloria that ends the Qui tollis section, the last segment in the Et incarnatus section of the Credo, and the third statement of the segment in the Benedictus).

It is also interesting to note that a basic systematic plan that Josquin uses for the endings of his segments is for the last note is always preceded by a note with stepwise motion. As a matter of fact, if all of the possibilities of stepwise motion pairs in the Phrygian mode are considered (i.e., D – E, A – G, etc.), the only exception is that C is never preceded by D. All of the other possible stepwise motion pairs (thirteen) are used at least once by Josquin as the last two notes of a segment.

It is difficult to provide a definitive answer why Josquin always ends his segments with stepwise motion occurring between the last two notes. There are several possibilities that could be considered; easier opportunity for creating cadences, easier

connection of segments, etc. While these possibilities may not pertain to all of the segments, a discussion of those situations where they do apply is in order.

That Josquin ends his segments with stepwise motion occurring between the last two notes initially seems to suggest that a cadence would occur on the last note of the segment, since it was conveniently preceded by a note a step above or below. This would allow Josquin the opportunity to have the last note of the cantus prius factus segment cadence with another voice.

Out of 45 segments, only 17 segments have at least a slight cadence that occurs on the last note of the segment. Josquin uses four pitches on which to cadence: E, A, G, and B. E is used most often (eleven times), followed by A (three times), then G (two times), and finally B (one time).

While the evidence clearly shows that while E has a clear majority over any other pitch as the cadence that occurs most often at the end of a segment, the fact is that cadences rarely occur at the end of a segment in the first place. While the stepwise motion between the last two notes of a cantus prius factus segment always provides an easy opportunity for creating cadences with other voices, for the most part that option is not exercised.

Not only do all of the segments with E as their last note at the end of sections have cadences on E, two other segments that do not have E as their last note at the end of sections also cadence on E (the segment that has B as its last note during the Christe and the segment that has G as its last note that ends the Patrem omnipotentem section of the Credo). Taken together, seven of the eight segments that end a section cadence on E,

giving additional support to the establishment of the Phrygian mode in Josquin's Mass.

It would appear, then, that the reason Josquin always ends his segments with stepwise motion occurring between the last two notes is not closely connected to the idea of giving himself an easier opportunity for creating cadences.

Strictly looking at the frequency of all of the vertical sonorities that occur during the last note of the segments, we find 22 instances of triads, 14 instances of dyads, and 7 instances of single note sonorities (and its octave equivalents). There are five different triads: GBD (eight times), DFA (five times), FAC (four times), EGB (three times), and CEG (two times).

From the segmentation chart, it will be noticed that there are instances of vertical sonorities that contain a slashed line between what would ordinarily be considered two separate sonorities. These have been considered a special case. There are three instances of such sonorities: one at the end of the second segment during Kyrie I, one at the end of the segment in Kyrie II, and one at the end of the last statement that ends the Et incarnatus section of the Credo. The vertical sonorities that occur at the end of Kyrie I and at the end of Kyrie II are essentially EGB sonorities throughout, but the vertical sonority that occurs at the end of the last statement that ends the Et incarnatus section of the Credo is essentially an EGB triad that occurs after a passing ACE triad. In this instance the last note of the cantus prius factus segment is E and is sustained long enough so that the ACE triad that occurs in the other voices changes quickly to form an EGB triad.

Dyads and single note sonorities can be interpreted as follows: dyad of EGB triad (six

times) and single note sonorities of EGB triad (three times), dyad of GBD triad (six times) and single note sonorities of GBD triad (two times), dyad of ACE triad (three times) and single note sonorities of ACE triad (two times), dyad of FAC triad (three times) and single note sonority of FAC triad (one time), dyad of CEG triad (three times), and dyad of DFA triad (three times).

Although EGB occurs slightly more often than GBD as the vertical most often used at the beginning of a segment, the connection of segments creates a situation in which these sonorities are not given any special emphasis; therefore, they have no more significance than any other EGB or GBD vertical sonority.

However, there is a direct correlation between the consistent placement of cadences on E that occur at the end of a segment and the vertical sonority that occurs during the cadence. Every cadence on E that occurs at the end of a segment has an EGB triad as its eventual vertical sonority.

An examination of the music in Josquin's Mass shows that out of 45 segments, the ending of 19 segments are followed by non-continuous segments. Of the twenty-six remaining segments, nine are followed by continuous segments, eight end a section (the only exception are the two sections of the Gloria), two are the last note of segments, and one is followed by material unrelated to the cantus firmus (the segment that occurs in the alto of the Christe).

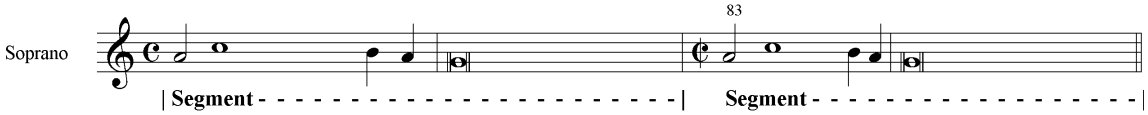
It probably should come at no surprise that out of 45 segments, the frequency with which the beginning of a segment is preceded and the end of a segment is followed is the exact same number, with non-continuous segments occurring 19 times and continuous

segments occurring 9 times. While it would not be totally accurate to say, this would naturally be the case with the connection of segments (a segment that preceded another segment probably followed still another segment; by the same token, a segment that followed another segment probably preceded still another segment, and so on).

If the idea that the reason Josquin always ends his segments with stepwise motion occurring between the last two notes was to allow for an easier connection of segments, for the most part this option is not exercised. An examination of the music shows that out of nineteen non-continuous segments, there were only seven instances in which the connection point between the last note of a segment and the first note of another segment that precedes it occurs with stepwise motion.

In example 42, the first segment ends at m. 82, and the second segment begins at m. 83 and continues on with its quotation of the chanson (shown in mm. 83 - 84 of example 42). Stepwise motion occurs between the last note of the first segment (G) and the first note of the second segment (A) that is connected to the end of the first segment.

Example 42. Credo, measures 81 – 84 (soprano)



CONCLUSION

The most important musical aspect that influences the structure of these two segmentation masses, the establishment of proportional relationships, is not the most obvious. In a comparison of these two masses, for example, sources of previous music research frequently point out that each composer took different approaches regarding the modal setting of his respective mass; Obrecht's Mass utilizes both the Phrygian and Aeolian modes, while in Josquin's Mass the Phrygian mode is the firmly established mode throughout. This difference in modal settings between these two masses, while significant, does not provide the primary driving force on which the structure of these masses is based. This is especially evident when an analysis of modality is considered in relation to the cadences on which the modality is dependent.

The cadences that occur in Obrecht's Mass play a more important structural role than in Josquin's Mass. Since segments in Obrecht's Mass are usually not connected to one another, strong cadences frequently occur at the end of the segments throughout. On the other hand, since the segments in Josquin's Mass are usually connected to one another, weak internal cadences frequently occur throughout, with strong cadences reserved for the end of sections. However, a closer analysis reveals that there is much more to the structure of these two masses than simply marking divisions of music by the formation of cadences.

Although to varying degrees, the establishment of proportional relationships appears to be the most important musical aspect that influences the structure of these two masses.

Throughout Obrecht's Mass the cantus prius factus occurs in the form of statements of segments in the soprano, and while strict proportional relationships do not always occur between the statements of segments themselves, an analysis of the long last notes at the end of statements of segments and the periods of rest that occur in the soprano between statements of segments reveals that there are consistent proportional relationships involving ratios of small whole numbers (i.e., 2:1, 3:2, etc.). During the time when Obrecht composed his mass, a conscious effort was made by architects to construct buildings with these proportional relationships in mind; similarly, this was an idea that Obrecht apparently incorporated to provide the structure for his mass.

In Josquin's Mass, elements of symmetry are found between the statements of segments in the Kyrie, and proportional relationships involving the 2:1 ratio between alternating statements of segments occur in the Credo. It is these proportional relationships between the statements of segments that provide the structure for these parts of Josquin's Mass, and certainly not the Phrygian modal setting or any internal cadences.

It is possible that other types of proportional relationships may have been incorporated by Josquin to determine the length of the statements of segments in the Gloria of his mass (i.e., the structure of a composition being based on the dimensions of a particular architectural structure, such as a church[1]). Perhaps the ideas presented in this study will encourage future research in this area.

[1] The tenor of Dufay's motet "Nuper rosarum flores/Terribilis est locus iste," composed for the dedication of the dome of the Cathedral of Santa Maria del Fiore in Florence, is laid out in four isorhythmic segments with mensural changes at each statement, in the proportions 6:4:2:3, which may have been intended to correspond to the proportions used in the architectural dimensions of Brunelleschi's dome.

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